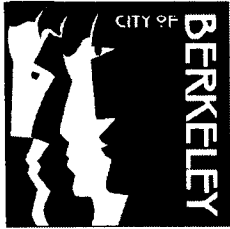


ATTACHMENT C

**CITY OF BERKELEY COMMENTS
ON
TRANSPORTATION SECTIONS
OF THE
UC LRDP EIR**



Office of Transportation

June 11, 2004

TO: Phil Kamlarz, City Manager

FROM: Peter Hillier, Assistant City Manager for Transportation

RE: Comments on Transportation Sections of the UC LRDP EIR

The Office of Transportation has reviewed the relevant transportation and parking sections of the University of California, Berkeley 2020 LRDP Draft EIR and has prepared the attached detailed comments to be included in the City's comments in response to the LRDP EIR. Our comments are divided into three major sections: (1) a summary of key items identified in the review; (2) detailed review of major items, and (3) a listing of specific items related to editing or presentation.

B7a-1

1. SUMMARY STATEMENTS

The following statements provide a summary of traffic issues that have been identified in the review of the University's 2020 LRDP DEIR and are discussed in detail below:

- Differences exist between Traffic Levels of Significance for the General Plan and the LRDP EIR.
- Impact assessments based on generalized locations of facilities are too inaccurate to replace the need for detailed project-level analysis.
- The University needs to consistently assess significant impacts for all University-related development in Berkeley.
- Including LBNL growth in both the baseline and cumulative scenarios makes it impossible to assess the incremental impacts of University LRDP growth.
- The LRDP proposes creating more parking than is justified by existing travel behavior. The LRDP fails to balance the competing policies of trip reduction strategies and parking supply strategies and its parking expansion cannot be justified.
- The LRDP needs to develop campus-wide parking supply and demand estimates rather than an analysis based only on increases in students and staff.
- The University should include as new parking all parking facilities included in the previous plan that have not as yet been constructed.
- The LRDP needs to consider impacts on residential, on-street parking.

- The University needs to contribute to the mitigation of significant impacts even if feasible alternatives have not been developed at this time by the City of Berkeley in its General Plan.
- Realistic alternative plans need to be developed and evaluated to a level of detail that enables a comparison to be made with the proposed project.
- The LRDP needs to provide a stronger commitment to the improvement of trip reduction strategies that will not only maintain current levels of drive-alone travel but also reduce them even further.
- The University needs to define in conceptual terms what it means by “fair share” participation in the funding of mitigation measures in order to provide guidelines for cost-sharing negotiations between the University and the City.
- The University and the City need to jointly develop monitoring programs based on performance measures for both facilities and trip reduction strategies.

B7a-1

2. DETAILED COMMENTS

A. RELATIONSHIP BETWEEN GENERAL PLAN, PROGRAM, AND PROJECT PLANNING

The LRDP is a program-level DEIR but it goes further to try to bridge the gap between the City’s General Plan and project-level planning. The University’s intent is to avoid project-level analysis for all projects included in the LRDP. The City feels strongly that the analysis at each of these three levels of planning are somewhat different and, especially for a major program without specific details, both program and project planning are necessary. As this issue is central to the discussion of transportation impacts for the LRDP, each of the three planning levels is discussed below.

B7a-2

Long-range, area wide planning. The development of the City’s General Plan involved an examination of overall traffic growth based on approved major development plans, such as the University’s 1990-2005 LRDP, as well as incremental growth in housing and employment. This growth results in transportation patterns based on the ability of transportation facilities to accommodate the distribution of travel origins and destinations. The State requires that a transportation forecasting model be utilized for the transportation analysis but does not specify in detail how the analysis has to be conducted. In many cases, the analysis focuses on major improvements rather than improvements at specific intersections. The final Plan provides guidelines and mitigation measures for anticipated growth but does not by itself convey any building rights.

Program planning that includes multiple projects or major phases of one large project. The University’s LRDP is a prime example of this category. Its purpose is to establish general development rights through a subarea analysis that includes a relatively detailed description of facilities that will be developed. It focuses on both area-wide and localized traffic, which

enables the City and a developer to provide timely and appropriate mitigation measures. Subsequent EIRs for individual phases of development will refer back to the program EIR for area-wide impacts and focus on impacts adjacent to the facility. At this level, intersection-level analysis almost always will be required. Consequently, the levels of significance for analysis at this level likely will be different from those that were used for area-wide, long-range planning. As the analysis is at a medium or long-term level, a certain level of uncertainty exists.

B7a-2

Individual Project EIRs. When a project is covered by a program EIR, the issues of the general size and location of a project usually are no longer in question. The project-level EIR can refer back to the program EIR, and it is desirable to utilize the same levels of significance that were utilized for the program EIR. On the other hand, analysis at this level likely will reveal impacts or mitigations that are somewhat different from those identified in the program EIR, particularly for facilities and services near the project site. Specifically, analysis at this level provides a better opportunity to address bicycle and pedestrian issues, which are particularly important adjacent to a project near the University. Depending upon when the project level analysis is performed, it may be necessary to update the analysis of existing and future conditions.

Based on the discussion above, from the City's perspective, it is important that all three levels of planning exist for major concentrations of development and that each level is consistent with the other levels and that each has an appropriate level of detail.

Given this background, the City provides below how it sees each of the three levels of planning related to the analysis of transportation impacts in the LRDP DEIR:

Levels of Significance for City of Berkeley General Plan and the LRDP DEIR

The analysis for the General Plan focused on directional segment analysis for the road network. The countywide traffic forecasting model was utilized to forecast traffic volumes with and without the project. The results of such an analysis is a peak hour, volume-to-capacity ratio based on the general characteristics of the segment, e.g. number of lanes and functional classification. The document presents seven criteria for significant impacts to the transportation system, two of which refer to roadway capacity. The other five criteria are important but are not considered in this discussion. The City's General Plan considers it a significant effect on roadway capacity if it results in either of the following to occur:

B7a-3

B7a-4

- For traffic operating at LOS D or better, causes a substantial increase in traffic volume on a roadway segment resulting in LOS E or worse ($v/c=0.90$) ("substantial" = 5 percent or more increase in traffic volume);
- Causes a substantial increase in traffic volume on a roadway segment operating at LOS E or worse ($v/c=0.90$) in baseline conditions ("substantial" = 5 percent or more increase in traffic volume), or
- Causes a roadway volume to exceed the roadway's capacity where it would not without the project.

The LRDP DEIR states that its traffic levels of significance are the same as those in the City's General Plan, but this is not true. Although similar, they have significant differences. Table 1 presents a comparison of examples of what would and would not be considered significant impacts under General Plan and LRDP levels of significance.

B7a-5

Scenarios that include a 5% or greater increase in traffic (Scenarios 1, 2, and 3) are the same for both the General Plan and the LRDP. Of most concern to the City is Scenario 5, where a change from LOS E or better to LOS F occurs with less than a 5 percent growth in traffic. For the General Plan, this would result in a significant impact, whereas in the LRDP DEIR it would not. The City feels that a 5% increase in traffic that results in LOS F is too low a threshold, given the resulting impacts on congestion that occur with LOS F.

Table 1. Comparison of Representative Analyses for LRDP and City General Plan

Road Segment Scenario	Directional Peak Hour Increase	Level of Service without Project	Level of Service with Project	Significant Impacts?	
				General Plan	University LRDP
1	5%	D	D	No	No
2	5%	D	E	Yes	Yes
3	5%	E	E/F	Yes	Yes
4	1%	D	E	No	Yes
5	1%	E	F	Yes	No

The City recognizes that CEQA allows the University as the lead agency to select levels of significance but questions whether or not increases in traffic levels, e.g. 5 percent, are appropriate levels of significance for identifying transportation impacts at the program or project level of analysis. The distribution of the growth at an intersection can significantly affect the resulting impacts on congestion. If the growth is primarily on critical movements, then a growth of less than 5 percent could result in significant impacts. It is more appropriate to utilize thresholds that are representative of intersection operations, such as critical volume-to-capacity ratio and average vehicle delay. A common threshold for volume-to-capacity ratio is 0.01 and for delay is 4 sec/veh. More and more, analyses are also including queue length, especially for closely spaced intersections. Where an increase in overall traffic growth remains a performance measure, it can lead to some inappropriate conclusions.

B7a-6

Another argument against the use of a constant performance measure, such as a growth in traffic or even volume-to-capacity ratio, is that it assumes that a straight-line impact exists between a traffic increase and all operating conditions at LOS E or F. This is definitely not the case, as impacts increase at a greater rate as capacity is approached. The use of a 5% level of significance in the LRDP DEIR consistently underestimates the impacts of traffic growth near or above capacity.

B7a-7

Table 2 presents the relationship between level of service criteria by volume-to-capacity ratio, which was used in the 1985 *Highway Capacity Manual* for signalized intersections, and the current methodology, which is based on average total delay per vehicle. It can be clearly seen that with higher volume-to-capacity ratios the delay increases at a higher rate with a given growth in traffic on critical movements. The rate of increase increases faster as one approaches and eventually exceeds the LOS F threshold. The average increase for LOS B conditions is 1 sec/veh for each 0.01 increase in the volume-to-capacity ratio. This value increases to 2.5 sec/veh for LOS E conditions. The value at or near LOS F is even higher.

B7a-7

Table 2. Relationship between V/C and Delay Intersection Analysis

LOS	Upper Threshold 2000 HCM (Total Delay)	1985 HCM (v/c)	Average Delay in Sec/ (.01 v/c)
A	10	0.60	--
B	20	0.70	1.00
C	35	0.80	1.50
D	55	0.90	2.00
E	80	1.00	2.50
F			

Although the City does not have any approved performance measures for impact analysis at the program and project levels, it reserves the right to develop such measures over time and to require the use of these measures for future traffic analyses.

Significant Impacts Identified at the General Plan and Program Levels

The City does not feel that conclusions regarding unavoidable impacts at the General Plan level of analysis can be transferred directly to program and project-level analyses. At these levels of analysis, the project proponent, in this case the University, has the obligation to investigate the full range of potential mitigations. It is true that the City's

B7a-8

General Plan does not provide any specific mitigation measures for congestion on road segments and, thus, is required to conclude that there will be some significant and unavoidable traffic impacts. This conclusion was reached in the context of a "Transit First" strategy recognizing that it cannot build itself out of traffic congestion and must pursue operating improvements and increased use of alternative modes.

B7a-9

The absence of a capital program in the General Plan to mitigate impacts, therefore, does not imply that the City does not intend to make capital improvements at intersections. Through monitoring and detailed traffic analysis, the City will be able to establish the timing and the appropriate mix of capital, operating, and trip reduction measures that will be required to provide appropriate mitigations in a timely manner. The General Plan commits the City to developing and implementing appropriate Deficiency Plans whenever an unacceptable level of service occurs on a

B7a-10

major road segment, according to monitoring studies conducted by the Alameda Congestion Management Agency. These plans likely will include a combination of capital improvements, operating improvements, and trip reduction strategies.

B7a-10

Given the above discussion, it is completely unacceptable for the University to say that traffic impacts are significant but unavoidable without adequate consideration of an alternative that examines increased incentives for trip reductions and other non-capital mitigation measures.

B7a-11

Relationship between Program Level and Project Level Analysis

The City feels strongly that the conceptual level of detail presented for the location and size of proposed facilities in the Draft LRDP EIR should not exempt the University from appropriate project-level traffic analyses.

B7a-12

Where it can be justified, CEQA allows analysis at the program level to satisfy project-level environmental review. Given the simplified development assumptions, a program-level review may be suitable for identifying impacts outside of the primary impact area – the one block adjacent to the University and the Southside. However, the non-specific nature of the proposed development should not preclude the need for project-level analysis in the vicinity of specific developments. There are inherent inaccuracies in traffic forecasting at intersections on local streets. Traffic forecasting models do not include all local streets, and Traffic Analysis Zones (TAZs) adjacent to the University have an area of 2-12 blocks. The University has added to this inaccuracy by not providing detailed descriptions of the size or location of residential and parking facilities. Given these uncertainties at the program level, the resulting analyses should be limited to their use in evaluation at that level. The City would be foolish to accept this level of analysis as being adequate for project-level assessment of impacts.

B7a-13

B7a-14

CONSISTENCY BETWEEN DOCUMENTS AND DISCUSSION OF SCENARIOS

Development of Scenarios

Generally, an EIR contains an assessment of project impacts for both baseline and cumulative conditions. Baseline conditions include all approved projects or growth forecasts, and the cumulative scenario would include likely projects that have been proposed but not as yet approved. In its comments on the LRDP EIR NOP, the City assumed that the University and LBNL EIRs “will include the other LRDP as a project contributing to cumulative impacts and that both EIRs will use the same data and assumptions about baseline conditions . . . so that analyses of impacts and mitigations measures are directly comparable.” Apparently, this was not done as a separate cumulative scenario does not exist. Instead, it appears that the proposed LBNL 2004 LRDP has been included in the baseline scenario, based on the statement in the DEIR that the baseline plus project scenario “include(s) all development foreseen under the general plans of each of the jurisdictions as well as the LBNL 2004 LRDP and the 2020 LRDP in the cumulative impact LRDP area.” (page 4.12-59)

B7a-15

The decision to include the LBNL 2004 LRDP in the baseline scenario makes it impossible to assess the individual impacts of the University's LRDP, especially for transportation-related impacts. Likewise, if the same assumptions are used for the LBNL DEIR, it will be impossible to assess the individual impacts of the LBNL growth. This situation is definitely not what CEQA intended.

B7a-16

In summary, the make-up of projects in the scenarios creates the potential for three ways in which impacts by the University's own levels of significance could be eliminated:

1. The addition of the LBNL traffic in the baseline could eliminate some conditions in the baseline plus project scenario where LOS D goes to E, which according to the University standards of significance does not require a 5 percent increase.

B7a-17

2. It is possible that the traffic increase for LOS E or F conditions would be above 5% for a project scenario without LBNL but lower than 5% with LBNL. In effect, the impacts of the LRDP have been underestimated by including the LBNL 2004 LRDP proposal in the baseline scenario.

B7a-18

3. It is possible that the total impact of University projects may be significant but that no significant impacts would exist for individual projects. For example, the traffic increases for both the University LRDP and LBNL might each be below 5% but together would be above 5% for LOS E or F conditions. No mitigations would be required for either program based on the University's strategy of separating the two programs, even though they both fall under the overall administration of the Regents.

B7a-19

The City feels that CEQA requires separate analyses with and without proposed University projects. The cumulative scenario would include not only the LBNL proposal but also the net increase in development contained in the revised DEIR for University Village.

B7a-20

Consistency between Documents

Related to the development of alternatives is the issue of consistency between environmental documents. It is of particular importance at this time, as the University has three major documents in the environmental review process at the same time -- a revised DEIR for University Village, the University's 2020 LRDP DEIR, and LBNL's 2025 LRDP. The timing of these documents complicates the ability of the City and the general public to assess the relative impact of the individual projects at a given location. For example, the Final EIR for the revised University Village project will not be released before comments are due for the LRDP DEIR. As the traffic analyses for all three documents have been completed, this DEIR should certainly present their findings in a consistent manner.

B7a-21

Consistency between documents should require that mitigation measures mentioned in one document should be referenced in the others, but this has not happened. For example, the University Village DEIR states that the Gilman/San Pablo intersection will experience significant

B7a-22

but unavoidable impacts, but the LRDP DEIR does not mention this impact. For the same project, the City has commented that almost certainly the Gilman/6th intersection experiences significant impacts if the level of service calculation sheets in the University Village’s DEIR are to be believed, but it does not show up as an impacted intersection in the LRDP DEIR.

B7a-22

At least three unsignalized intersections are significantly impacted by the LBNL development, based on data contained in the level of service calculation sheets – Hearst/Gayley, Gayley/East Gate, and Gayley/Stadium Rim. One of the intersections is at the University’s northern boundary, and the other two are within its boundaries. At not only these intersections but also other intersections adjacent to the campus, it is important to be able to differentiate between the impacts for the LBNL and University LRDPs. As already noted, this is not possible given the scenarios that have been analyzed.

B7a-23

Alternative Scenarios

The evaluation of Alternatives in the DEIR is grossly inadequate. The Alternatives are dismissed in a cursory manner, without sufficient qualitative analysis and with *no* quantitative analysis. Once the project was found to have significant and unavoidable impacts, the University should have developed reasonable alternatives that went beyond existing best practices in an effort to mitigate impacts.

B7a-24

The evaluation of alternatives includes no discussion of the potential for trip reduction policies and programs to reduce future parking demand. Furthermore, when trip reductions are proposed, as in Alternative L-2, the EIR fails to provide any meaningful analysis of trip and emission reductions due to the increased use of alternative travel modes.

B7a-25

The evaluation of Alternative L-2 should provide an analysis of potential trips reduced from the application of ‘every effort’ to accommodate growth through shifting commuters to transportation alternatives. An analysis of the potential for mode shifting and trip reduction is critical to the analysis. Without such an analysis, the second sentence of section L-2 Transportation and Traffic (page 5.11-9), “[t]his would create a new significant parking impact...,” has no basis in fact. Contrary to the EIR’s statement, if transportation alternatives were able to transform travel behavior and reduce the parking demand sufficiently, then this would *not* create a new significant parking impact.

The City continues to feel that the DEIR Alternatives are ‘straw men.’ In fact, the DEIR states this intention clearly in Section 5.1.2 (page 5.1-8), “...this alternative serves the purpose of isolating and *maximizing the effects* of less new parking. (emphasis added.)

B7a-26

Instead, the EIR should develop and evaluate an alternative using a lower Headcount coupled with No Parking, which would have precisely *minimized* the effects of less new parking.

An alternative consisting of less new parking and strong trip reduction measures, such as Alternative L-1, should establish the amount of new parking from the results of aggressive trip reduction programs, involving substantial capital investments, use of parking pricing, parking management and other Transportation Demand Management policies and practices. Such an

B7a-27

Alternative should also consider the development of satellite parking facilities, sited within a 10-20 minute transit ride from campus. This ‘Satellite Parking Zone’ should be modeled on the Housing Zone presented in the DEIR. | B7a-27

The City would like to see the University provide a reasonable estimate of improved mode split percentages that might be achieved over time with the improvement of University trip reduction programs and coordination with City programs. Such a realistic Alternative would be more in line with the transportation policies in the City’s General Plan policies as well as those for the University than either the proposed project or the alternatives listed. | B7a-28

The Air Quality discussion of Alternative L-2 (page 5.1-9, paragraph 1-2) is also entirely inadequate because it does not contain any data or analysis regarding the reduction in vehicle emissions. The vehicle emission reductions under this alternative must be presented for the EIR to be complete. | B7a-29

This discussion also fails to provide any useful analysis of the reduction in stationary source emissions. Notably absent is any discussion or calculation of the significant reduction in construction emissions from **not** building 2,300 parking spaces. | B7a-30

The EIR further avoids a meaningful analysis by stating that the stationary source emissions “would remain unaccounted for in projections informing the Clean Air Plan.” The EIR should provide a table regarding the sources and percentage contribution of emissions in the 2020 LRDP, clearly divided between stationary and vehicular. | B7a-31

It appears that an actual air quality analysis was not conducted for Alternative L-2. It is not clear if the Eco Pass concept mentioned in the introduction on page 5.1-7 has been modeled in the trip reduction calculations. If so, the EIR should state the degree of increased transit ridership assumed under this Alternative Air Quality analysis. The EIR should also present its assumptions of trips reduced due to parking shortages, as well as the increases in search traffic, and should show these results on LOS. | B7a-32
| B7a-33

In the evaluation of Alternative L-2 (page 5.1-11), the EIR fails to provide any traffic analysis of this alternative. Because no traffic analysis offered in this section, there can be no informed discussion of how access to campus is affected under this Alternative. Therefore, the EIR’s dismissal of the alternative is fundamentally unsupported. | B7a-34

PARKING ISSUES

The City has a number of concerns about the LRDP DEIR’s discussion of commuter parking supply and demand. A key concern is that the LRDP’s proposed parking expansion to a maximum of 2,300 new spaces is poorly defined and justified. The EIR should clarify, in a single, clear table and accompanying textual explanation, its parking demand assumptions – and these should be consistently applied throughout the LRDP. In fact, the EIR provides several different explanations for its derivation of parking demand. The parking expansion program continues to be fundamentally misconceived, which the City has previously stated on Page 10 of our October 9, | B7a-35
| B7a-36

2003 Response to the NOP. There is no discussion of parking pricing, shared parking, or other parking management principles contained in the City/University TDM Study, such as real-time way finding signage.

B7a-36

Furthermore, the University is basing the need for additional parking solely on the basis of new students and staff/faculty. The analysis properly should examine the need based on existing conditions. In other words, the analysis should be based on campus-wide parking supply and demand and should consider that some of the approved 790 parking spaces that are being built as part of the 1990-2005 LRDP could satisfy some of the parking demand for growth in the proposed LRDP.

B7a-37

Despite the objections that follow, the last paragraph on 3.1-28 states that the University would adjust the parking supply objective to reflect further reductions in drive-alone rates through demand reduction initiatives and through construction of new student housing. Although a welcome statement, the City considers it to be a meaningless commitment unless there is an explicit policy framework and procedure to regularly adjust the parking supply based on the positive results of such initiatives.

B7a-38

Parking Supply and Demand

The EIR must include further information on the Parking Impact Analysis. On page 4.12-4, the EIR cites “past studies by the University and additional analysis.” Documentation for the statement that the “impacts of unserved parking demand on non-UC parking facilities...were identified” should be provided. These impacts are not identified in this Draft EIR – and must be.

B7a-39

The EIR should also present a more complete discussion and definition of parking demand, including key findings and excerpts from the “1999 study of campus parking” mentioned briefly on page 5.1-11 of the EIR. This should be presented in Section 3 of the EIR.

B7a-40

The projected demand figure, as explained further on page 4.12-18 in the last paragraph, is based on a suburban campus with access to parking at current prices. This is not a suburban campus – in fact, it is probably the most transit and bike/walk accessible in the UC system. Additionally, price sensitivity is a critical issue. What are historical parking costs for UC parking? What is the expected elasticity of demand at different prices? Several scenarios of future price increases (historical/aggressive/reduced cost) should be modeled and parking demand should be reported for each.

B7a-41

B7a-42

The EIR should explain the extent to which the 1,000 parking spaces proposed in the 1990-2005 LRDP have been provided. Based on the statement in Section 3 that 300 parking spaces were displaced by construction since 1990 and 790 parking spaces (690+100) have been approved for construction, then there would be 510 net other spaces. How many of these were built? If not built, it is possible that the actual headcount of students and staff/faculty did not warrant their construction? Is it the intent of the University to build these in addition to the 2,300 net new spaces contained in the proposed LRDP? Likewise, the need for the new 790 spaces should be justified even though they have been approved. It is possible that some of the justification for all

B7a-43

B7a-44

of these spaces no longer exists or that permanent changes in travel behavior have occurred since 1990. In any case, parking expansion should not be 'banked' or carried forward from subsequent LRDPs without comment.

B7a-44

The EIR should explain the status of the 1,000 spaces. As mentioned above, the EIR must clarify if none of the 790 Approved Spaces are considered a contribution towards the parking space requirements for the new demand that will be created in the proposed LRDP.

B7a-45

The EIR provides a distribution of the Maximum Net Additional Parking Spaces without adequate explanation. The note for Table 3.1-3 (page 3.1-22) is unclear and requires further explanation. This table assigns a maximum Net Additional Parking Spaces of 600 to the Campus Park, 1,300 to the West Adjacent Blocks, and 600 to the South Adjacent Block. The note attempts to explain that although these maximums total 2,500 spaces, this is only in order to provide flexibility in siting individual projects, and that the actual total is 2,300. The text and tables should provide a clearer explanation of this math; the table and all relevant text should properly list the parking supply expansion as a range (ie. 400-600 in the Campus Park, 1100-1300 in the West Adjacent Blocks, 400-600 in the South Adjacent Blocks.)

B7a-46

The mathematics is also unclear defining the total number of parking spaces as they relate to the headcount growth. The EIR should clarify the parking requirements in a table or by adding parking space assignments to Table 3.1-1.

B7a-47

The parking formulas do not seem to comment directly on the need for parking expansion for Visitor & Vendors. These should be expressly included in the parking supply formulas, and should reflect the presumably high turnover rates of this user category.

B7a-48

The City also has further difficulty with the LRDP math regarding parking demand: Even though the 2001 Survey reports a 51% faculty and staff and 11% of the students drive alone, the parking supply is not directly related to these figures, nor should it be. Surveys do not reflect two important characteristics of travel to the University, as follows: (1) a significant number of vehicles commuting to the campus do not stay the entire day, and it can be assumed that not all of their parking durations overlap, and (2) in many cases, both students and faculty do not travel to the campus every day. Given these considerations, the actual parking space demand per student and per staff/faculty is less than the survey would suggest.

B7a-49

The discrepancy between existing daily parking demand and what the University has assumed for its estimate of new demand can be clearly demonstrated, as presented in Table 3 below. Current campus workers total 12,940 (Table 3.1-1 in EIR). The 1:2 parking ratio being used to plan parking supply expansion would require 6,470 parking spaces. The 31,800 students would require 3,180 spaces at the 1:10 ratio. Even without consideration of the 1,200 Visitor and Vendors, the employee and student parking ratios would require 9,650 spaces, which is an enormous 2,750 more than actual current 2004 real life conditions, and even 1,960 spaces less than the assumed baseline condition of Actual + Approved.

B7a-50

Clearly, the 31,800 students and 12,940 workers are currently using parking spaces at a different ratio than the 1:2 or 1:10 that the travel survey data being used in the EIR would suggest. Using survey data instead of actual conditions to base its future parking demand formulas is an inappropriately coarse technique that misses the important efficiencies of parking space turnover, flexible schedules, vehicle occupancies, and other de facto sharing of parking spaces.

B7a-50

Furthermore, using the travel survey data as the basis for a parking demand project implies an acceptance of current conditions of the campus – and should mean that the expansion population would be presented with the same parking conditions as exists today. However, the EIR has clearly used drive-alone percentages that are not reflective of existing conditions.

B7a-51

Table 3 presents estimates of what the actual student and staff/faculty ratios based on actual parking supply. A ratio of 0.05 has been selected for students, and the staff/faculty ratio has been computed based on available parking spaces. Based on this methodology, workers are really utilizing parking at 41% per person instead of the 50% (1:2) proposed in the EIR. Students are really utilizing parking at perhaps .05 rather than the .1 (1:10) proposed in the EIR. Even allowing for the addition of 790 new Approved Parking spaces, the figures are 47% and 5%.

Table 3. Comparison of Parking Demand based on Various Parking Ratios

Category	Headcount	Parking Demand based on EIR Rates		Actual Parking Supply		Actual + Approved Parking Supply	
		Spaces	Parking Space/person	Spaces	Parking Space/person	Spaces	Parking Space/Person
Current campus workers	12,940	6,470	0.50	5,310	0.41	6,100	0.47
Current students	31,800	3,180	0.10	1,590	0.05	1,590	0.05
Visitors/Vendors	1,200	0?		0?			
Total Parking Spaces		9,650		6,900		7,690	

Using these figures to calculate new parking demand would yield quite different results. The new students would require 83 parking spaces instead of 165; the new workers would require 1,177 parking spaces instead of 1,435. Together, the headcount growth would require 1,259 parking spaces instead of 1,600, or 341 fewer parking spaces. This is significant to the Project's justification of parking expansion.

Table 4. Comparison of Assumed and More Realistic Future Parking Demand

			New Parking Demand, using EIR factors of 10% & 50%	New Parking Demand, using Existing Condition factors of 5% and 41%
Students	Current	Net Addl		
Regular Term	31,800	1,650	165	83
Summer	11,400	5,700		
Employees				
Faculty	1,760	220	110	
Academic Staff & Visitors	3,040	1,840	920	
Non-academic staff	8,140	810	405	
	12,940	2,870	1,435	1,177
Total Spaces			1,600	1,259
Other Visitors & Vendors	1,200	800	?	?

B7a-51

On page F.1-18 of Technical Appendix F, the LRDP population increase is estimated to generate 1,745 new vehicle commute round trips to the Campus area. Thus, the figure of 2,300 parking spaces includes an explicit surplus of 555 spaces. This figure is in addition to the City’s conclusion that the demand estimate itself is too high.

B7a-52

It is also explicitly stated that the purpose of this parking is to attract existing University-related vehicle trips that currently park on-street or at non-University operated parking facilities. Thus, the University is trying to meet existing parking demand, unmet by University parking supply.

B7a-53

The EIR presumes a Downtown parking deficit of 600 spaces under an “Existing + Approved Developments” scenario. Thus, UC Berkeley is proposing to utilize its facilities to help meet an estimated shortage of regular downtown parking. Utilizing University funding to meet regular City parking demand without involvement of the City is an unprecedented proposal, and the City strongly objects to it.

Yet another definition of parking demand is given on page 5.1-11. The EIR states clearly that “UC Berkeley presently estimates a deficit of at least 1,300 parking spaces.” It states that this figure is consistent with the findings of the 1990-2005 LRDP and then cites a 1999 Campus Study, which “recommends the construction of 1,300 net new parking spaces to address current needs.”

B7a-54

In the Parking Impacts section on page 4.12-55, the EIR presents another set of parking supply numbers, which need to be placed in context more clearly with the other parking supply figures given. This paragraph states that “planned future commuter parking supply” would rise from 6,424 to 8,724 with the 2020 LRDP.

However, previous figures and text have stated that the planned future parking supply (Actual + Approved) is 7,690, and no breakdown of commuter parking was provided. A comparison of these figures would seem to imply that of the 7,690 spaces, 6,424 (84%) would be for commuters. Is this true?

B7a-54

This also seems to imply that of the proposed 9,990 total parking spaces proposed in the 2020 LRDP, 8,724 spaces (87%) would be for commuters. Is this true?

This paragraph further states that the parking demand generated by the needs of future growth in campus headcount is 1,745. An additional 555 spaces are proposed to reduce an existing parking deficit – that parking demand that is *thought* to be filled by non-University parking facilities and on-street parking. (There is no evidence offered to support the 555-space figure.)

The section also states that existing unmet demand for University parking is estimated at over 3,500 spaces. (page 4.12-55) However, on Page 5.1-11, the EIR states that “UC Berkeley presently estimates a deficit of at least 1,300 parking spaces.”

As mentioned previously, on page 4.12-8, sixth paragraph, the calculated parking demand is based on a suburban environment in which all users have access to adequate and strategically located parking spaces at current prices. While this calculation is clearly included in the EIR only for comparison purposes, this “latent demand” method is at best useless, and at worst misleading.

B7a-55

Use of a suburban model overstates the demand for parking in several ways. Obviously, UC Berkeley is not a suburban campus. In suburban setting, a campus commuter would face different traffic conditions. Latent demand calculations fail to include any discussion of impacts of traffic congestion on parking demand, yet worsened traffic conditions are a likely result, due to traffic associated with a larger and more concentrated parking supply. In a feedback loop, the reduced convenience and travel time should impact parking demand and travel mode choice.

In addition to traffic congestion, the hypothetical suburban campus employee or student would not only consider the cost and availability of parking, but also the likely conditions of other travel modes. In a suburban setting, there would be a likely assumption of poor transit service, inadequate bicycle and pedestrian infrastructure, and housing separated from other land uses by considerable distances. All of these suburban conditions would increase the demand for parking.

However, in the real world, UC Berkeley is probably the most transit and bike/walk accessible campus in the UC system. Real UC travelers factor the bicycle infrastructure, BART, AC Transit, and sidewalk network, as well as considering parking supply and price and likely driving time and convenience in their travel decision.

The demand for parking at UC Berkeley is not easily compared to a hypothetical suburban campus, and so latent demand calculations should be discarded from this EIR.

The DEIR states in Technical Appendix F that the excess parking is approximately the same as the downtown parking shortage, which implies that the University intends to provide public parking in

B7a-56

competition with existing private and City-owned facilities throughout the day. The City rejects the notion that the University should consider building facilities that it cannot justify to meet its own day-to-day demand. Even if such facilities were determined to be desirable, their planning should be done in close cooperation with the City so that trip reduction strategies are not compromised. The City takes seriously its role of achieving an effective balance between downtown parking demand and supply so that downtown businesses can thrive while at the same time trip reduction strategies can be promoted.

B7a-56

On page 4.12-41, the EIR states that the proposed construction of up to 2,600 net new bed spaces is expected to *have a significant impact on parking demand* by enabling students to live close enough to campus...(emphasis added). The logical conclusion is that the parking demand for the LRDP growth should be lower than current conditions, but this is not reflected in the parking demand estimates.

B7a-57

New Parking Facility Location

The EIR should clearly define the boundaries of the Adjacent Blocks in the text of the document, and not just in the Figures. From the Figures, the West Adjacent Blocks area appears to consist of the area east of Shattuck and west of Oxford, between Durant and Virginia. According the Figure 3.1-5, the Adjacent Blocks South area appears to consist of the land between Bancroft and Durant, west of Ellsworth and south of Stadium.

B7a-58

Given the University's ownership of several parcels in this area, the EIR should comment on the expected locations of major new parking facilities. For example, are the new parking facilities presumed to be placed on lands currently owned by the University, or through acquisition of new parcels?

B7a-59

The EIR states that a maximum of 600 spaces will be added to the South Adjacent Blocks. The EIR should explain clearly that this new supply would be in addition to the 690-space Underhill Facility.

B7a-60

On page 3.1-46, the DEIR states, "In General, campus parking...should be consolidated in structures at the perimeter or outside of the Campus Park, accessed directly from city streets." This policy would result in the placement of the 600 spaces (max.) allocated to the Campus Park on the periphery of campus, which would put it very nearby a large portion of the other 1,900 UC parking spaces that are proposed. For instance, if some or all 600 Campus spaces were to be placed on the western periphery of the Campus Park, the traffic impacts would interact in significant ways to the impacts of the proposed 1,300 new parking spaces in the West Adjacent Blocks, a.k.a. Downtown Berkeley.

B7a-61

In the City's view, it is unacceptable to condemn any edge of the Campus Park to a "parking ghetto." Consideration of traffic flow, urban vitality and public safety also suggest that at some high level of concentration, parking facilities would be to the detriment of traffic conditions and the urban fabric.

B7a-62

To avoid an unacceptable concentration of new parking facilities, the University should be required to develop a parking facility siting formula designed to ensure that the combination of Campus Park and Adjacent Block parking space density does not exceed some per acre factor.

B7a-62

Given the issue of parking density, the DEIR should have included satellite parking in the examination of Alternatives. The LRDP should use the Housing Zone transit travel times methodology to develop a Distant Parking Zone and evaluate it as an Alternative. Locating parking facilities in locations accessible to campus within 10-20 minutes by transit could be especially effective, especially given the Class Pass and proposed UC employee Bear Pass.

B7a-63

Defining the maximum net total of new parking

The note to Table 3.1-3 repeats “The University may not substantially exceed the NET total without amending the 2020 LRDP.” The EIR should state clearly what is implied by ‘substantially.’ Given the context of this table, it can be inferred that the University intends that “substantially exceeding the net total” is defined as anything less than 200 spaces, but more than 2,300. This must be clarified in the EIR.

B7a-64

Parking Spaces and Trip Generation

On page 4.12-4, the EIR states, “Vehicle trips were assigned to each cluster proportional to the proposed number of parking spaces.” The City’s feels that the trips should be reduced to reflect the fact that actual parking demand ratios are lower than those derived from the survey.

B7a-65

It is important to note that de facto shared parking is already in place through UC Parking & Transportation’s policy of selling parking permits in numbers above existing parking spaces. This policy should be explicit and understood not as undersupply, but as effective distribution. Some UC students and employees already design their work schedules to avoid peak periods, and so are able to share parking with those who leave campus midday, freeing a parking space. This complex ‘sharing’ could be supported with improved real-time space availability information. (The University’s participation in a real-time parking information is discussed further in the Mitigation section of this document.)

B7a-66

In F.1-16, the parking space/trip generation rate recognizes that each parking space generates about 0.40 inbounds AM peak hour trips and 0.35 outbound trips during the PM peak hour. Peak hour analysis makes sense for traffic analysis, but it doesn’t for parking supply and demand evaluations.

B7a-67

This trip generation finding means that 2,300 new parking spaces would generate 918 AM peak hour trips and 816 outbound PM peak hour trips. This is based on current parking driveway and parking facility occupancy counts. For the premise to hold until 2020, the EIR should state that the University will take steps to ensure that the current ratio of peak hour employee or student schedules remains constant through 2020, in order to ensure the .4 and .35 peak hour trip generation per parking space.

The University should develop specific employee and student scheduling policies and procedures to maintain these peak hour trip generation rates by encouraging off peak commutes to campus. This is discussed further in the proposed mitigations section of this document.

B7a-67

Parking Pricing

On the last paragraph of page 4.12-41, the EIR states that cost is a less important factor than convenience and travel time as factors in mode choice. Not all costs are perceived the same way – and therefore can result in a variety of behaviors. Fixed costs affect travel behavior differently than variable costs, for instance. The price of parking is known to have a strong impact on travel behavior, more so than gas prices or the price of transit. The EIR should comment on the price elasticities of parking vis a vis transit ridership.

B7a-68

This EIR does not include any discussion of the price of parking. Driving + Parking costs in comparison with the costs of other modes is a critical issue in establishing demand. The latent demand analysis does not provide any analysis of the sensitivity of price.

The EIR should evaluate the price sensitivity of parking and its effects on travel behavior. What is the demand if parking prices were 10% higher? 30% higher? The EIR should at least comment on the expected elasticity of demand at different parking prices – and how price could be used to manage demand in the LRDP. Ideally, several scenarios of future price increases (historical/aggressive/reduced cost) would be modeled and parking demand reported for each.

Parking Management

On page 4.12-18, fourth paragraph, the EIR states that UC parking facilities are at or near capacity during most of the day. This may be true, but the supporting statement is not directly relevant. The fact that the chosen policy of UC Parking & Transportation to ‘oversell’ parking permits at ratios of 1.2:1 for employees (1.2 permits sold for every 1 parking space available) and 2.6:1 for students would seem to show that parking supplies are serving a larger number of people than UC recognizes in this EIR. If the “license to search” UC parking permit was an unacceptable user experience, where no parking could be found on a significant number of occasions, then UC would presumably not be able to set 1.2 or 2.6 ratios. As the EIR states, a permit does not guarantee a space. However, the parking permit ‘product’ apparently satisfies users enough of the time, since the demand for permits remains extremely high even though parking spaces aren’t guaranteed.

B7a-69

Customer grumbling is not the same thing as a real parking shortage problem. Certainly, short term parking shortages and other frustrations exist, but many issues perceived as parking shortages can, in fact, often be resolved through improved signage or parking management practices.

Effective management of existing facilities can help reduce the need for additional parking. The City feels that the University should recognize the value of providing a parking management system that can direct vehicles to facilities that have available parking spaces. With a high demand for parking, vehicles often are required to search all floors in order to find the last available spaces. In some cases, vehicles search a facility only to find that it is completely full and then must travel to another facility. A parking wayfinding system with dynamic signing leading to and from garages can improve utilization of garages and minimize traffic impacts adjacent to garages.

B7a-70

On page 4.12-18, fifth paragraph, presents the issue of ‘practical capacity’ to explain why a condition of 94% of parking spaces filled is considered maximum capacity. Utilizing a signage information system that would direct drivers to the last, ‘hidden’ 170 parking spaces in the UC system, could expand the ‘practical capacity’ of University’s parking supply. While practical capacity will always be slightly below 100% due to circulation delays, UC could reduce its perceived shortage by more than 100 spaces, and probably for many times less money than the cost of constructing the equivalent new parking.

B7a-70

The EIR should offer a Parking Information Mitigation that commits the University to fair share cost participation in the Parking Information & Wayfinding Program currently under development with City, consultants, private sector parking facilities, and other stakeholders. UC should provide for the installation and management of a comprehensive parking information system and manage parking in collaboration with the City’s system. As per the University sponsored TDM study, parking management is less expensive than constructing additional parking. This proposed Mitigation is repeated in the Mitigation section below.

B7a-71

Finally, the City is concerned that two LRDP policies related to parking are in direct opposition to each other: “Increase the Supply of Parking to Accommodate Existing Unmet Demand and Future Campus Growth” and “Reduce Demand For Parking Through Incentives For Alternate Travel Modes”. Given the choice between these two policies, the LRDP DEIR clearly comes down hard on the side of increased parking. It assumes that existing drive-alone percentages of 50 percent for staff/faculty and 10 percent will continue unchanged into the future. However, providing more parking than required will negatively influence the drive-alone rates. The University’s lack of commitment to reducing these levels, especially the level for staff/faculty, does not represent an increased commitment to reducing the demand for parking. If the trip reduction strategies had been emphasized or even given equal weight, the need for parking spaces certainly would have been reduced below the number that is being proposed. It is clear that there are numerous developments on the horizon that will provide real opportunities in the future for increasing the use of alternative modes for travel to and from the University. They include permanent increases in the cost of gasoline, the BRT project on Telegraph, region-wide increases in the availability of carpool lanes, and increased congestion on freeways leading to and from Berkeley.

B7a-72

Additional Parking Issues

The parking supply and demand at the major non-University parking facilities presented in the third paragraph of page 4.12-22 and in Table 4.12-5 is out-of-date and does not reflect current conditions. Parking is not near capacity in these major facilities, probably due largely to the weak economy, and less so to the higher parking prices at City facilities.

B7a-73

The recorded 100% utilization of Sather Gate Garage is also suspect in Table 4.12-5.

Note A says that this figure is from the Downtown/Southside TDM Study. The EIR should cite the page number of the TDM study and source of the count. If accurate at the time the TDM Study was developed (2000), it’s certainly dated today since Sather Gate Garage has had significant capacity for at least the past two years. The EIR should use the City’s more recent data or may use Sather Gate Garage data from the Library Gardens DSEIR.

B7a-74

Similarly, Table 4.12-5 should use utilization data for Sather Gate Garage for Nights and Saturday Afternoon from either the City or the Library Gardens DSEIR. B7a-74

The observed lower parking utilization in the non-University facilities on typical weekend night and weekends is explained by the availability of University parking, and the non-enforcement of on-street time limits. These may be factors, but certainly the departure of the commuter vehicles from the area is the primary reason for the increased parking supply. B7a-75

Comments related to Transportation Demand Management and Trip Reduction

The City has a number of concerns over the EIRs failure to thoughtfully consider possibilities for expansion and improvements to the University's trip reduction programs and policies. B7a-76

Attachment 1 to this document provides a useful summary of current UC Berkeley Trip Reduction programs. This attachment, or its approximation, should appear in the EIR. Although it contains some potential improvements over existing programs, it still falls short of what other universities have shown can be accomplished. An example is the small number of vanpools (5), and absence of an Eco Pass program for all staff and faculty. The City recognizes that improvements in trip reduction programs are likely to take place incrementally, but the LRDP should include measures to raise the bar for its "best practices" over the next 16 years.

The Continuing Best Practice AIR-1 (page 4.2-21) presents a difficult, if not impossible proposition – to provide only *the same or equivalent* transit programs, yet hope to *improve* the mode split and *reduce* the use of single occupant vehicles. It is not practical to maintain the status quo in program and expect better results, especially in light of an expanded parking supply being built to meet 'unmet demand.' The Campus New Directions Program consists of good programs that must be *expanded and enhanced* in order to improve the mode split and reduce trips as the University intends. B7a-77

In the last paragraph on page 4.12-41, the EIR promises "A broad array of incentive programs," but only suggests one new effort over the next 16 years. That suggestion: "To work with AC transit toward implementation of bus rapid transit" is overly general. More specific commitments should be offered.

The LRDP should also comment on other potential major capital investments in new transit systems. For example: B7a-78

- If 37% of people who live within five miles of campus drive alone now, could a campus shuttle system be expanded to bring more nearby UC-affiliates directly to campus?
- How can UC better improve connectivity to rail (Amtrak/Capital Corridor)?
- Could major UC investments in Transit Oriented Development near BART stations or major AC Transit lines increase transit mode share?

- What major investments could improve the performance of the Campus Shuttle?

B7a-78

Table 4.12-6 and the Pedestrian Circulation section on page 4.12-25 include interesting excerpts from the City's Bicycle and Pedestrian Safety Task Force Report, but their relevance to this EIR is not clear. The University should go further to analyze the incident locations and age groups involved in order to identify the University affiliates involved in the collisions.

B7a-79

The University should offer a Best Practice to form a University Bicycle and Pedestrian Safety Task Force, possibly as a component of the proposed UC Bicycle Plan development.

B7a-80

While the Class Pass statistics given in the second paragraph of page 4.12-30 are interesting, the EIR should provide estimated ridership increases and travel mode percentage shifts since the inception of the Class Pass.

B7a-81

The EIR states on page 3.1-28 that the UC Berkeley has an exemplary record of promoting alternatives to the automobile "by California standards."

B7a-82

This claim incorrectly implies a direct causal relationship between UC's work promoting alternatives and the travel behavior of its affiliates. While certainly a significant positive factor, it is critical to recognize the urban context and existing conditions - including a constrained parking supply, traffic congestion, high levels of transit service, and the City of Berkeley's improved bicycle network

It also compares itself to municipalities and employers in Alameda County. While interesting, the EIR should properly compare UC Berkeley's travel behavior to other universities, such as well-known exemplary University programs at the University of Washington, or the University of Colorado, Boulder to gauge just how exemplary UC Berkeley is.

B7a-83

The EIR only presents one trend in its discussion of campus commuting (page 4.12-17 Commute Travel Modes): transit use among faculty/staff is said to have increased slightly between 1996 and 2001. The EIR should present other trend analyses. For instance, has Single Occupant Vehicle commuting also been decreasing? If so, shouldn't the EIR presume continued decreases in solo commuting?

B7a-84

Also, what are the expected mode shifts from the establishment of a transit pass for faculty and staff similar to the student Class Pass? What would the impact be of a Faculty/Staff transit pass on parking demand at various out-of-pocket price levels?

B7a-85

This analysis should be in the evaluation of Alternative L-2, but it is not.

The EIR should comment specifically on trends in student travel. The only survey cited was conducted in 2000 – the EIR should discuss the impacts of the Class Pass on transit ridership, for instance.

B7a-86

The EIR states "...UC Berkeley considers the potential of such programs [Eco Pass] to be modest..." (page 5.1-11.) The EIR should present a discussion of mode shift based on the UC Class Pass. The EIR should also discuss the different possible types of Eco Passes (employer provided vs. out-of-pocket, etc.) and the impacts of program design on mode shift potential.

B7a-86

The EIR should also examine and present Best Practices and results of other university Universal Transit Pass programs.

B7a-87

Finally, this alternative presents, however vaguely and dismissively, only the idea of an Eco Pass to reduce vehicle trips. The EIR should include a complete analysis of the current "exemplary" UC programs and project their possibility of expansion of these and other programs.

B7a-88

- Expansion of carpooling incentives, support and marketing
- Expansion of vanpool incentives, support and marketing
- Incentives for employee use of Bear Pass (Eco Pass) – prizes, employee commute club privileges
- Incentives for bicycle use
- Investment in transit infrastructure with AC Transit, BART, and others
- Increase in transit subsidy in New Directions pre-tax program to \$20/month. (This is the City of Berkeley's current employee subsidy.)
- Expansion of Bear Shuttle
- Provision of Car Sharing in UC housing

Alternatively, UC should offer a mitigation to reduce equivalent trips made by the non-UC population. UC could offset the parking shortage by supporting increased alternative travel by the general public. This could free up excess private and City parking for UC affiliates. UC Berkeley could return to funding a TRiP Commute Store and TDM Program Management Agency to serve the larger Berkeley community to offset its inability to further reduce trips.

B7a-89

The University could also pay the per-trip generated fee expected in the City's Transportation Services Fee currently under development.

B7a-90

The EIR states that UC Berkeley offers a comprehensive array of trip reduction services (page 4.12-42: Campus Policies and Programs). The Services may be comprehensive, that is, cover a variety of travel modes. However, comprehensive is not the same as optimal or 'state of the art.'

B7a-91

This section should comment in detail on the current status of the New Directions and other programs intended to reduce single-occupant automobile use.

For example, while it is positive that the University has a vanpool program, UC reports that there are just five vans in operation in 2004. Assuming 50 participants in the program, UC's vanpool participation rate is just 0.4% (50/12,490 current headcount). This rate seems like it could be significantly improved, with some reasonable attention and effort, over the next 16 years.

Air Quality Issues

In Table 4.2-6, the EIR should provide additional information on the calculation of Existing Student and Employee Vehicle Emissions. The EIR should indicate assumptions regarding daily trips and VMT in Technical Appendix or elsewhere.

B7a-92

LRDP Impact AIR-5

In the last sentence of paragraph 3 on page 4.2-26, it is not clear why the Air District's possible non-attainment of air quality standards is given as the reason that the significant emissions impacts are unavoidable. Shouldn't the fact that the area is already potentially a non-attainment area make responsible agencies all the more sensitive to air quality concerns, not less?

B7a-93

The EIR seems to take a position something like "It's already broken, so we don't have to fix it.", which is crude, but understandable. But in matters of air pollution, the position is more like "We're already almost choking on the smog, so we might as well keep polluting."

Regarding "the increasing number of parcel delivery trucks using alternative fuel" (page 4.2-27) and other emission reducing activities, the University should mitigate this impact by adopting specific purchasing policies to directly encourage or require the use of lower emission delivery and other service vehicles.

B7a-94

Cumulative Impact AIR-1

The second paragraph on page 4.2-31 seems to say that the responsibility for the 2020 LRDP's significant increase in pollutants will be 'regionalized' by the Air District's process of updating the Clean Air Plan: "The BAAQMD will refine existing control measures as well as add new control programs to minimize the emissions at the regional level..." Although there may well be efficiencies at managing some emissions regionally, on the face of it, it doesn't seem fair to make the region minimize emission that result from UC Berkeley. That is essentially exporting responsibility to UC's regional neighbors.

B7a-95

On page 4.2-33, the EIR assumes that, because CARB's rulings are expected to improve TAC emissions from diesel engines over time, the cumulative impact of the LRDP's share of TAC emission increase is less than significant. However, there is a large potential lag time before final adoption of these regulations and it is unlikely that they will be imposed as rapid mandatory vehicle replacement.

B7a-96

The University could better ensure that this impact is less than significant by adopting an accelerated vehicle retirement program and low emission procurement program, combined with an engine replacement and particulate filter. The BAAQMD and the State's Carl Moyer Program can provide additional technical information.

Additional Comments

Housing Zone

The development of a Housing Zone accessible by transit (Figure 3.1-5, page 3.1-26 and Policy 5 (p 3.1-27) should reduce the current rates of students driving alone to campus below 10%. The EIR

B7a-97

does not consider the travel behavior impacts of the Housing Zone, or the potential for significantly improved transit service via the AC Transit BRT serving campus.

B7a-97

The EIR should explain the methodology of the Housing Zone calculation. It should state the amount of walking time to Doe Library that was added to the transit trip time. The City is especially interested in knowing the walking time from downtown BART to Doe Library.

Also, the EIR should state how was the 20-minute figure for transit-access was selected. Does it include average waiting time at the beginning of a transit trip? The use of the unexplained 20-minute figure implies that a 20-minute travel time to Doe Library is necessary to successfully attract transit riders. The EIR should present average travel times of all UC commuters. Since the current mean travel time to work for Berkeley is 27.8 minutes according to the 2000 Census, the Housing Zone should be adjusted to reflect a travel time roughly equivalent to their solo driving colleagues.

B7a-98

Figure 3.1-5 shows the Housing Zone based on AC Transit routes as of July 2003. This figure should be redone in three ways:

B7a-99

- a) Include the proposed BRT alignment into the Housing Zone. With BRT, the Housing Zone would be expected to continue farther on Telegraph into Oakland;
- b) Redraft to reflect current AC Transit routes since the significant service deployment plan changes of December 2003 and any subsequent changes; and
- c) Expand the Housing Zone to include designation of suitable housing nodes near 'some BART stations,' as noted in the Figure notes. The EIR should clearly identify which BART stations would qualify as nodes within the Housing Zone definitions. The EIR should further evaluate and comment on housing development opportunities in each BART station, including review of relevant BART Station Area Plans, current or proposed Transit-Oriented Developments (TOD), as well an evaluation of existing or proposed programs to encourage development of University housing near these stations.

Model Issues

Does the Alameda County Countywide Travel Demand Model used for 2020 Without Project include any UC growth, either in employment or enrollment? If so, the traffic impact analysis would have to be adjusted to model a true Without Project condition.

B7a-100

The model land use zones paragraph on page 4.12-2 is a confusing and convoluted story. The difference between an 18-year LRDP period and a 20-year span are said to be negligible. However, is the traffic analysis only based on time-span? Is the use of 2025 instead of 2020 also negligible? That is, will cumulative regional traffic impacts in the period 2021-2025 change the analysis significantly?

B7a-101

After lengthy explanation, the traffic model used is entitled "a modified April 2003 model incorporating the HEG land use adjustments." Given the numerous adjustments, perhaps there

B7a-102

should be additional comment in the EIR on this model's performance and adequacy, perhaps by independent parties? In addition, the City and CMA should have this model for future sensitivity analyses as needed.

B7a-102

The first paragraph of page 4.12-3 contains a significant statement about the model used for the traffic impact analysis. The EIR states that the CMA's March 2004 updated model redistributed employment throughout the City of Berkeley, unlike in the model used in the LRDP DIER. Does this redistribution of employment projections change any traffic distribution?

B7a-103

The forecasted traffic volumes used for the EIR analysis are based on 2005-2025 growth, and the adjustment of the CMA model doesn't change net land use growth. But the forecasted traffic volumes in this EIR have not been readjusted based on employment distribution. The EIR should not assume that the forecasted traffic volumes are consistent with the latest updated CMA model. Rather, a sensitivity analysis should be conducted, to ensure such consistency, and this should be reported in the EIR.

B7a-104

The "Caltrans" section on page 4.12-6 contains a statement that requires further explanation: the 3rd bullet states, "the existing plus project case is not evaluated, because the project is a long-range plan which will take 15 or more years to build out" is confusing. It seems that the main point of the EIR is to evaluate the existing plus project case.

B7a-105

The EIR must state what Caltrans' response is to this failure to comply with its recommendation stated in its response to the LRDP EIR NOP.

DESCRIPTION OF IMPACTS AND MITIGATION MEASURES

Each of the potential impact areas analyzed are discussed below:

TRA-1. Bicyclist Impacts. The Draft EIR has concluded that impacts are Less than Significant without Mitigation. The City is pleased with the University's intention, stated in TRA-1, to work with the City to provide "needed public improvements" that serve the bicycle mode of travel. However, it is wrong to assess bicyclist impacts solely on the basis of capacity. The emphasis needs to be on ensuring safe travel and improving the quality of bicycle travel. Data exist to justify the need for a program to reduce bicycle accidents.

B7a-106

The University's commitment, as stated in the Draft EIR, is limited to participation with the City in the development of a Bicyclist Plan. With the significant increase in bicyclists that will occur with implementation of the LRDP, the City feels that the impact should be considered significant and mitigated to less than significant with actions similar to that given for pedestrians in TRA-12, which would be to work with the City to implement plan elements as needed during the life of the 2020 LRDP on a fair share basis.

B7a-107

The EIR estimates increases in bicycle volumes of 8-10% (page 4.12-44). However, the EIR does not attempt to evaluate the actual impacts of these increases. Instead, it defers responsibility in two ways.

B7a-108

First, the EIR states that the “policies and planned improvements in the Berkeley Bicycle Plan are designed to accommodate existing and future growth in bicycle volumes, and the General Plan encourages bicycling...” “*Therefore, this increase in bicycling is foreseen in local plans, and is desirable.*” (Emphasis added.)

B7a-108

This implies that the Bicycle Plan and the General Plan’s awareness and support of future growth in bicycle volumes 1) explicitly recognized that 8-10% of future growth would come from UC, and 2) that the City is expected to pay all related infrastructure expenses, simply because it is *foreseen and desirable*. This is absurd. The University should pay a fair share of the expenses related to current and future bicycle access and safety-related expenses within a Bicycle Zone (defined as being within a 20 minute ride to Doe Library.)

The next sentence says, “bicycle volumes, while expected to increase, would not exceed the capacity of available bicycle facilities.” The EIR offers no support for this statement, yet finds the impacts of an 8-10% increase in bicycle volumes *insignificant*. As part of the UC’s proposed Bicycle Plan, the University should provide detailed bicycle traffic analysis -- which should also consider the combined impacts of increased automobile, transit (including BRT) and pedestrian traffic -- on the type, design and cost of bicycle facilities required. The City and University should jointly develop a capital spending plan and cost sharing mechanism to provide the necessary improvements.

B7a-109

The City feels it is inappropriate to base significance only on capacity. Even if capacity is not an issue, the City feels that significant impacts for bicyclists would occur because of an increase in unsafe conditions unless programs go beyond UC’s existing best practices. The City of Berkeley already has the highest bicycle injury rate in the State, and a significant increase in day-time population at UC inevitably will increase exposure to unsafe conditions and lead to even higher injury rates unless preventative actions are taken. In addition to physical improvements, increased enforcement and more resources for an injury prevention program are considered essential elements of a comprehensive safety program. If the University does not choose to implement its own injury prevention program, then it should contribute funding to the City’s existing program so that outreach to UC bicyclists can be improved.

TRA-2. Parking Impacts of Increased Student Housing. The Draft EIR has concluded that impacts are Less than Significant without Mitigation. The City accepts the conclusion that impacts of new student housing would be less than significant for commute parking to the University, but discussion of this impact completely ignores on-street parking, which is of high important to the existing residents in what the University is calling the Housing Zone. It is naïve in the extreme to assume that simply meeting the zoning requirements for off-street parking at residential developments will not increase the demand for on-street parking. If this were true in the area, there would be no on-street parking in the late evening. The addition of 2,600 new housing units definitely will create significant residential parking impacts. The University needs to work with the City to develop appropriate mitigations.

B7a-110

Currently, the City and the University have agreed that no Residential Parking Permits will be issued to students living in University-owned dormitories. It is unclear whether or not all of the housing proposed in the Housing Zone falls into this category. If not, is the University willing to agree that residents of all housing would not be eligible for Residential Parking Permits?

B7a-110

The EIR must state more explicitly how the “provisions of the 2020 LRDP and continuing best practices” would not increase residential parking demand. The area adjacent to the University already has virtually a zero vacancy rate during both the daytime and evenings. The EIR states in Section 4.12-44 that “generally, students living in housing built by the University are expected to have relatively few cars, since the housing would be built within a mile of Doe Library or within a block of a transit line...” The above generality is used to support LRDP Impact TRA-2 but, without supporting policy, it is too subject to change and maintaining current levels of vehicle ownership is unenforceable in its current form.

The LRDP EIR should include a mitigation whereby the University agrees to let the City place restrictions on the eligibility of residents of University-built housing to receive a City of Berkeley Residential Parking Permit. Either no RPPs would be issued, or they could be issued on a lottery basis in small quantities. This would serve to guarantee the expected LRDP Impact TRA-2.

TRA-3. Traffic Impacts of Construction. The Draft EIR has concluded that impacts are Significant but Less than Significant without Mitigation. The City appreciates the recent coordination that has occurred with City staff related to University construction projects. The City is hopeful that lessons learned on recent construction projects can be applied to all major construction projects in the future. Nevertheless, residents continue to be impacted by construction traffic. The phasing of projects does limit impacts at any given time but on the other hand extends the length of impacts. Construction impacts will continue to be a major concern of residents and, with an increase in projects west of campus, businesses.

B7a-111

TRA-4. Parking Impacts of Construction. The Draft EIR has concluded that impacts are Significant but Less than Significant without Mitigation. The City is comfortable with the efforts that the University has taken in recent projects that minimize construction impacts related to parking.

B7a-112

TRA-5. Transit Impacts. The Draft EIR has concluded that impacts are Less than Significant without Mitigation. The City agrees that impacts are likely to be less than significant; however, we are concerned that the resources may be unavailable to expand the Bear Shuttle system if and when it is warranted.

B7a-113

The section on BEAR Transit (page 4.12-48) states that actual shuttle trip growth will be monitored and “service frequency may need to be increased, along with route adjustments.” This is a welcome offer of monitoring-triggered mitigation.

However, the monitoring frequency and methodology should be described in the EIR. Additionally, the expansion of service frequency and adjustments of routes should be offered as a formal Mitigation in this EIR, instead of as a Continuing Best Practice.

B7a-113

The BEAR Shuttle could be more than a perimeter circulator shuttle – it could serve as a major trip reduction program if the service area was expanded to better serve the UC commute population that lives within a five-mile radius of Campus. The BEAR Shuttle could also serve as a critical link to satellite parking facilities, as proposed by the City in these comments.

B7a-114

The Transportation and Traffic analysis of Alternative L-3 (page 5.1-14) dismisses the importance of the shuttle service between RFS and the Campus Park because it currently charges a fare not covered by the Class Pass. Instead, the EIR should offer information about the costs of operation and the possibility of reducing the fare through UC funding or including it in the next Class Pass election.

B7a-115

TRA-6 and 7. Intersections with Significant Impact Adjacent to the Campus that can be Adequately Mitigated. Included in these two impacts are one signalized intersection and seven unsignalized intersections. The intersections and recommended mitigation measures are as followings:

- Cedar/Oxford: revise lane configurations at existing signal.
- Durant/Piedmont: new traffic signal to replace all-way stop.
- Derby/Warring: new traffic signal to replace all-way stop.
- Addison/Oxford: new traffic signal to replace two-way stop.
- Allston/Oxford: new traffic signal to replace two-way stop.
- Kittredge/Oxford: new traffic signal to replace two-way stop.
- Bancroft/Ellsworth: new traffic signal to replace side-street stop.
- Bancroft/Piedmont: new traffic signal and lane modifications to replace all-way stop.

Notably, five of the intersections are located on the University’s edge and a sixth (Durant/Piedmont) is only one block away. The remaining two intersections, Cedar/Oxford and Derby/Warring, are on routes that already include a high percentage of University-related traffic. Based on a cost of \$200,000 for a new signal and \$50,000 for lane modifications, the total cost of improvements for these two impacts is \$1.5 million. As the University not only is creating the impacts, but also contributes a high percentage to the baseline traffic, it should contribute a high percentage of the costs of these improvements.

B7a-116

The City is pleased that the University has agreed to participate in the funding of improvement measures at these intersections on a “fair share” basis. The City has some serious concerns regarding these two impacts, as follows:

- The City does not feel that all intersections with significant impacts have been identified, given the general details of construction locations and timing.

- Given that no specific locations have been provided either for facilities, the City feels that for transportation impacts each project should have a focused project-level analysis that examines traffic, pedestrian, and bicycle impacts and mitigation measures, as appropriate.
- The University should provide a better understanding of the University's understanding of what it means by "fair share." Given the considerable expense that will be required to provide adequate mitigation measures, it is important that both the City and the University be able to do long-range capital planning and not be constrained by the need for project-by-project negotiations of what "fair share" means. See the section later in the memo related to "fair share" commitments by the University.

B7a-116

TRA-8 and 10. Significant Traffic Impacts Considered to be Unavoidable.

Intersections (TRA-8) include University/6th Street and University Avenue/San Pablo Avenue. Route segments on the CMP system (TRA-10) include the following for a total of 6.23 miles:

- Ashby Avenue westbound, between Adeline Street and San Pablo Avenue (0.97 mi.)
- Ashby Avenue eastbound, between College Avenue and Domingo Street (0.50 mi.)
- University Avenue westbound, between MLK Jr. Way and I-80 (1.70 mi.)
- San Pablo Avenue northbound, between Gilman Street and Marin Avenue (0.47 mi.)
- Shattuck Avenue southbound, between Dwight Way and Adeline Street (0.32 mi.)
- Shattuck Avenue southbound, between Hearst Avenue and University Avenue (0.12 mi.)
- Dwight Way westbound, between MLK Jr. Way and Sixth Street (2.15 mi.)

The LRDP DEIR is quick to conclude that the significant impacts identified are unavoidable since no projects have been identified by the City in its General Plan to mitigate congestion. As a result, the University states that it has no financial obligation to address the congestion. The statement that "campus transportation programs and incentives would continue to reduce the number of auto commute trips" attempts to soften this conclusion, but is completely without merit since the University's existing travel behavior has already been considered in the traffic forecasts. The overall conclusion for these impacts is a serious misreading of the City's General Plan. Although the General Plan admits that some traffic impacts may be unavoidable, it attempts to address congestion through a "Transit First" policy and where that fails to address problems agrees to develop Deficiency Plans that will include an appropriate mix of capital, operating, and trip reduction programs.

B7a-117

At this time, it is difficult to assess the improvements that will be required to reduce the impacts to an acceptable level. As a preliminary estimate, it is assumed that the emphasis will be on improving signal operations, which would involve new equipment at intersections as well as Intelligent Transportation System (ITS) equipment along corridors. Based on an average cost of \$600,000 per mile, the total cost would be approximately \$3.8 million.

B7a-118

It is completely unacceptable for the University not to participate in the funding of programs and facilities that would mitigate significant traffic impacts that it creates on major gateways to the

B7a-119

City. These two impacts should be a wake-up call to the University that it needs to improve its trip reduction programs rather than assuming that continuation of existing behavior is adequate for the future.

B7a-119

TRA-9. Traffic Impacts of Housing Outside of City Limits. The University indicates it will perform traffic studies for projects located outside of the City Environs. The City appreciates the University's recognition of the need to conduct such studies. However, the City feels that project level traffic studies should be required not only of these projects, but also of all projects because of the imprecise nature of the traffic analysis that was performed for the LRDP.

B7a-120

TRA-11. Parking Impacts. The City is glad that the University recognizes that more parking spaces are being proposed in the LRDP than its own analysis suggests are necessary. However, as the previous discussion in this memo indicates, it finds its discussion of the need for these spaces is seriously flawed.

B7a-121

In addition to possible mitigation measures that would reduce the need for parking, the City would like two additional measures included, as follows:

- Parking Information and Wayfinding Program. University should develop a parking signage & information system that would direct drivers to the last, 'hidden' 170 parking spaces in the UC system. This action would expand the 'practical capacity' of University's existing parking supply.

B7a-122

The University should participate on a fair-share basis in the Parking Information & Wayfinding Program currently under development with City, consultants, private sector parking facilities, and other stakeholders. UC should provide for the installation and management of a comprehensive parking information system and manage parking in collaboration with the City's system. As per the University sponsored Downtown/Southside TDM study, parking management can be cost-effective by reducing the need for some additional parking by increasing utilization of facilities.

- Maintaining Peak Hour Trip Generation per Parking Space Ratios. As discussed in the earlier Parking discussion, the EIR's "peak hour trip generation per parking space" of 0.4 and 0.35 peak hour trips per parking space are very important assumptions if future peak hour traffic estimates are to be trusted. Therefore, it is critical that the University take steps throughout the LRDP period to maintain or improve current ratios of peak hour employee or student trips.

B7a-123

The University should develop specific employee and student scheduling policies and procedures to maintain these peak hour trip generation rates by encouraging off peak commutes to campus. The University should monitor trip generation rates through bi-annual capacity and driveway counts and take necessary steps to at least maintain current ratios.

Proposed changes and additions to Other Transportation-Related Mitigation Measures

LRDP Mitigation Measure AIR-4-b (page 4.2-25)

The first bullet should be edited to read “To the extent the equipment **and fuel** is available and cost effective, UC Berkeley shall require contractors to use alternatives to **conventional** diesel fuel (including B100 biodiesel), retrofit existing engines...”

B7a-124

This Mitigation is welcome, but the City would like to see a specific process for evaluating the cost effectiveness and practicability of these excellent goals. Would construction bids be favored based on the composition of their fleet? Their willingness to run their trucks on biodiesel? How much additional cost of biodiesel or particulate traps or contractual requirement thereof would be deemed cost effective and practicable?

The City of Berkeley is recognized as a national leader in the use of biodiesel in our heavy vehicle fleet. The Berkeley Unified School District is a partner in several alternative fuel programs for large vehicles. The City may be able to partner with the University and private construction contractors to create a nationally important model of low-emission construction through biodiesel and alternative fuel use.

Proposed Mitigation: Car Sharing

Car-sharing has been shown, in a Federally-funded study carried out by UC Berkeley’s Department of City and Regional Planning, to reduce vehicle ownership, miles traveled and pollution. In order to better ensure LRDP Impact TRA-2, the University should provide for the placement of car-sharing facilities in all University-built housing, and should provide further incentives for the use of car-sharing in lieu of owning a car (membership and price subsidies, marketing support).

B7a-125

Fair Share Participation in the Implementation of Mitigation Measures

The discussion below focuses on the key issue of “fair share” reimbursement, which is mentioned for each significant impact where a mitigating improvement has been identified.

B7a-126

The University, to its credit, has agreed to pay its “fair share” of traffic improvements where mitigations can be identified to reduce impacts to less than significant. Included is the monitoring of traffic congestion at intersections where significant impacts are forecast to occur. However, the LRDP DEIR has carefully avoided a discussion of what is meant by “fair share.” One can only assume that the University’s intent is to negotiate its meaning for each individual project, which could make the University’s commitment almost meaningless, as there is no guarantee that adequate funds would be provided to pay for the required improvements.

The University likely would refer to the DEIR for the revised University Village project, where “fair share” was defined as follows: “a contribution to the roadway or intersection improvement

similar to those described in Government Code Sections 54999 et seq. for contributions to utilities. In addition, where a fair-share payment is agreed upon, the University will pay its fair share only if the applicable jurisdiction has established and implemented a mechanism for collecting funds from any other developers and entities contributing to traffic impacts, and the jurisdiction builds the relevant roadway or intersection improvement.” Basically, what this means is that the University’s contribution has an upper limit of the cost of the project, that other entities contributing to traffic growth in the area should be treated similarly, and that the contribution shall go towards a specific project that is implemented. These are all reasonable assumptions and have been met by the City in the past and will continue to be.

B7a-126

Although it has not established any specific procedures for the funding of transportation improvements by private and public developers, the City has established numerous precedents with public and private developers to ensure that impacts identified in a traffic study are mitigated in a fair and equitable manner. To cite some recent examples, the City obtained funds from Target, which is building a new store on the Eastshore Highway frontage road, to help fund improvements at the Gilman interchange; it has successfully negotiated cost-sharing arrangements with the University at several intersections adjacent to the campus, and Vista College has agreed to provide a significant transportation mitigation fee in lieu of providing parking at its new downtown campus under construction.

B7a-127

Although the need likely will exist, the City would like to see basic guidelines provided in the DEIR for what constitutes “fair share” contributions. The City feels that the following concepts must be included:

B7a-128

- Capital projects for which the University would provide “fair share” contributions would include but not be limited to impacts listed in the DEIR and would be based on planning and monitoring studies jointly prepared by the University and the City. The imprecise nature of a 16-year plan where the exact location of facilities has not been fixed is unlikely to identify all impacts, and even where impacts do occur as forecast the appropriate mitigation measures might be different than those selected. In some cases, lesser improvements might be adequate.
- The “fair share” should consider not only the increase in traffic related to the University LRDP but also the extent of University traffic in the baseline traffic. At locations within one block of the University, it should pay close to 100 percent of the costs. Given the extent of growth anticipated in the LRDP in the block immediately south and east of the University, this area will essentially become an extension of the campus from a transportation perspective. As the distance from the University increases, University traffic will represent a lower percentage of total traffic, and the “fair share” would be significantly lower. However, it would not be lower than the percentage increase forecast in the LRDP EIR.
- “Fair share” contributions should occur not only for capital improvements that provide mitigations but also for trip reduction programs that are necessary to mitigate impacts. What the City particularly has in mind is increased funding for trip reduction strategies that

B7a-129

B7a-130

would help mitigate traffic impacts at intersections and route segments that have been identified as being “unavoidable”. The funding could be directly by the University or in payments to the City for its programs.

B7a-130

Besides not defining what it means by “fair share,” the University has made several incorrect assumptions regarding its basic responsibilities for participating in the mitigation of significant impacts, as follows:

1. For signalized intersections and major travel corridors, the University has assumed that no mitigations for significant impacts are required if no specific improvement projects have been included in the City’s General Plan or Capital Improvement Plan. The only exception is at Cedar/Oxford where it suggests changes in lane geometry that can be achieved within the existing curb-to-curb distances. It is unrealistic to assume that all potential improvement projects at these locations have already been identified. The City fully intends to take appropriate measures to reduce congestion to acceptable levels but also realizes that it cannot build its way out of all congestion problems. In recent years, the emphasis has been on improving traffic management through the installation of Intelligent Transportation (ITS) equipment and services. Their planning and installation will continue as will the City’s efforts to reduce vehicle traffic through its “Transit First” policies. The University definitely should be expected to contribute its “fair share” to all necessary mitigation measures, whether or not they have all been identified at this time.
2. The LRDP DEIR assumes that intersection mitigations are primarily achieved through capital improvements, which contradicts the main thrust of the City’s General Plan transportation strategies. Where impacts are determined to be unavoidable, the possibility of adequately mitigating the impacts through trip reduction strategies or even a combination of capital improvement and trip reduction strategies is not addressed. Concerning the potential for trip reduction strategies to address the impacts, the following statement is made several times in the DEIR: “While campus transportation programs and incentives would continue to reduce the number of auto commute trips, this impact would remain *significant and unavoidable*.” In this statement, the University is asserting that its trip reduction policies will reduce traffic from what has been forecast. However, the LRDP assumes that the University’s trip reduction strategies will only continue the current travel behavior, and there are no indications that major changes will occur in incentives offered to faculty/staff/visitors/vendors, which comprise most of the growth. The City considers it unacceptable for the University to assume trip reductions beyond what can be justified in the DEIR. Admittedly, the University has relatively aggressive trip reduction strategies; but in essence, it is resting on its laurels. The City finds this overall strategy unfortunate and unacceptable.
3. For unsignalized intersections, the University has assumed that whenever the levels of significance are reached that the appropriate mitigation is a new traffic signal. The decision whether or not to install a signal depends on a variety of factors, including level of service analysis, traffic signal warrant analysis, potential impact on signal coordination and operations of adjacent intersections, and the cost of improvements. For unsignalized

B7a-131

B7a-132

B7a-133

intersections, the level of service analysis actually can be less important than for signalized intersections, as it is often based on the approach with the worst level of service; and this result can be independent of the traffic volume involved. For example, it is possible for an intersection to have LOS F, when the critical approach may only have five left turn vehicles. Through the suggested traffic monitoring programs, appropriate mitigation measures will be developed that might include lesser improvements.

B7a-133

It is suggested that mitigation measures for signalized and unsignalized intersections be specified as follows so that the conclusion could be reached that impacts are “significant but potentially avoidable:”

B7a-134

Unsignalized Intersections: “The University will participate on a fair share basis in funding appropriate capital improvements and trip reduction strategies that will improve operating conditions at the intersection, hopefully to an acceptable level of service. Capital improvements might include but are not necessarily limited to installation of a traffic signal, installation of improvements to pedestrian and bicycle movements, changes in lane designations to provide appropriate separation of left-turn, through, and right-turn movements. (Note: designations of exclusive right-turn lanes would not include free right turn channelization.) The University would also agree to fund improvements in trip reduction strategies that might include but are not necessarily limited to University funding of direct and indirect “Transit First” strategies, such as Eco passes, or agreement to participate on a “fair share” basis in the City’s transportation services fee, if and when it is approved by the City Council.”

Signalized Intersections: Where significant and unavoidable impacts have been identified, the City would like to see the wording changed to “significant and potentially avoidable” with the use of the following statement: “Although no specific capital improvements currently are identified, the University agrees to participate in reducing impacts to less than significant to the extent possible. Included would be participation on a “fair share” basis in capital improvements that are identified through traffic studies conducted by the City, including those included as part of a Deficiency Plan required by the Alameda County Congestion Management Plan and updates to the General Plan. Also, it agrees to increase its funding of trip reduction strategies, which would include but not necessarily be limited to Eco passes, or agreement to participate on a “fair share” basis in the City’s transportation services fee, if and when it is approved by the City Council.”

B7a-135

City Interface Policy 1

The City Interface Policy 1 (page 3.1-46) is a welcome suggestion of partnership. However, the sentence that states that UC Berkeley and LBNL and the City should “jointly seeks funds” to improve the Campus Park Edge should be expanded. It should state that the agencies should “**allocate funds** and jointly seek outside funding for capital investments....”

B7a-136

MONITORING

In the City's response to the LRDP EIR NOP, the City encouraged the University to adopt a monitoring program for transportation facilities similar to what was required for the Alta Bates Hospital development. In the LRDP EIR, the University has agreed to participate in a monitoring program for intersections that are found to have significant impacts. The City wants to make sure that there is agreement concerning what is meant by a monitoring program.

The City sees monitoring as having three major elements: (1) monitoring of traffic conditions adjacent to the University; (2) monitoring of travel behavior by students and staff/faculty to assess the success of trip reduction programs, and (3) area-wide monitoring to identify unacceptable levels of congestion on the City's gateway corridors.

The LRDP DEIR has focused on the first element, monitoring of traffic conditions adjacent to the University. The monitoring program should include all appropriate intersections located in the primary impact area where University facilities either already exist or are likely to be located. It is possible that significant impacts could be located at intersections that were not identified in the program-level EIR. Also, it is possible that some mitigation measures identified in the DEIR might not be required.

B7a-137

The monitoring of travel behavior would be based on a combination of surveys and data collected from trip reduction programs. The City is disappointed that the University has chosen to adopt existing travel behavior rather than establishing a goal of furthering reducing the level of drive-alone traffic. This element is important to assess the success of the University's trip reduction programs.

B7a-138

Nevertheless, the last paragraph on page 3.1-28 of the DIER states that the University would adjust the parking supply objective to reflect further reductions in drive-alone rates through demand reduction initiatives and through construction of new student housing.

This is a welcome offer of monitoring and flexibility, and the City would like further development of a policy framework and procedure to regularly adjust the parking demand based on the results of such monitoring of drive-alone rates.

The third element is area-wide monitoring of traffic conditions. The City accomplishes this element through on-going data collection programs and the traffic monitoring program conducted by the Alameda County Congestion Management Agency. The City would not ask the University to participate in this level of monitoring, but would expect it to participate in the funding of mitigation measures for congestion on road segments identified in TRA-10.

B7a-139

3. IMPROVED DOCUMENTATION OF ASSUMPTIONS, ANALYSIS PROCEDURES, AND RESULTS

For the intersection analysis, the ability to provide a comprehensive review has been complicated by the absence of data in Table F.3-3. In the final EIR, it is requested that the following changes be made:

B7a-140

- Provide the percent increase in traffic so that the extent of impact can be assessed. This information was provided for the segment analysis but not for the intersection analysis. Omitting this information appears to have been done only because it would require an extra page. The City is particularly interested in identifying growth impacts that are close to the five percent threshold.

B7a-140

- Provide information indicating the extent to which University traffic impacts conditions that are already at Level of Service F. For LOS F conditions, the only performance measure given is “>80 seconds” for signalized intersections and “>50 seconds” for unsignalized intersections. Without this information, it is difficult to assess the extent of impacts. For two-way stop intersections, it would be useful to provide the number of vehicles on the critical movement, as level of service for these facilities is independent of the traffic volume, e.g. LOS F could occur for five vehicles per hour. For other intersections, two suggestions are made, as follows: (1) for up to 120 seconds of delay, the actual number is given and “>120” is provided for higher delays, and (2) the volume-to-capacity ratio is provided, which unlike delay is a straight-line function.

B7a-141

- The appendix containing the level of service calculation sheets should contain a map showing the location of zones where parking facilities are assumed.

B7a-142

- TRAFFIX requires two pages per intersection to provide full documentation of the level of service results for the operational method, and both pages should be provided. Otherwise, the reviewer has no assurance that all assumptions remain unchanged from one scenario to another. For example, attempts to replicate the 2020 analyses at the 6th/University and San Pablo/University intersections with TRAFIX were unsuccessful. The only alternative would be to provide a list of all defaults and assumptions for data that is reported on the second page.

B7a-143

- Correct typos or confusions in text and tables, as follows:

Page F.1-24 second paragraph: The text on the first line should read “Approximately 818 new transit trips would be generated...” instead of “Approximately 818 new transit tips would be generated...”

B7a-144

Table F.3-3. Hearst/Gayley/La Loma (Intersection 18): “>” signs appear to be typo because LOS is at E. Also, change from LOS C for existing conditions to E for baseline conditions strongly suggests that University developments included in baseline have significant impacts, as discussed elsewhere in these comments.

B7a-145

Page F.1-9. The text states that the proposed new parking facilities total 2,500 spaces, but that the 2020 LRDP will be limited to 2,300 spaces to provide flexibility in the location of facilities. The use of both of these numbers in Table 3.1-3 without a footnote creates confusion for the reviewer. Double asterisks should be provided for the individual land uses as was done for housing beds.

B7a-146

Page 4.12-30, paragraph 3. The third sentence regarding the “September 2003 summary update on the Eco Pass” does not seem relevant to this EIR.

B7a-147

Page 4.12-39, paragraph 5. The San Pablo Avenue Rapid is really an enhanced bus service and should properly not be referred to as a Bus Rapid Transit (BRT) service. This is especially confusing given AC Transit’s actual Bus Rapid Transit project.

B7a-148

Page 4.12-24, Table 4.12-5. The recorded 100% utilization of Sather Gate Garage is suspect in this table. Note A says that this figure is from the Downtown/Southside TDM Study. The EIR should cite the page number of the TDM study and source of the count. If accurate at the time the TDM Study was developed (2000), it’s certainly dated today since Sather Gate has had significant capacity for at least the past two years. The EIR should use the City’s more recent data or may use Sather Gate data from the Library Gardens DSEIR.

Similarly, Table 4.12-5 should use utilization data for Sather Gate Garage for Nights and Saturday Afternoon from either the City or the Library Gardens DSEIR.

B7a-149

Attachment 1:
UC Berkeley Trip Reduction/TDM Activities, 2004

B7a-150

(City comment: derived from UC written and verbal reports to City Office of Transportation, May 2004)

Student AC Transit Pass Program (Class Pass)

3.5 million student rides annually

Students voted to establish program 1998-2002, continue program 2002-2006

High-Value BART ticket

Students receive a \$2 discount. *(City comment: Is this UC's subsidy or BART's normal high value ticket discount?)*

1,300 students participate *(City comment: monthly? annually?)*

Employee AC Transit Pass Program (Bear Pass)

Under development, 2004.

Expected results is 1,300 employees participating and 250,000 rides annually

(City comment: what is cost to employee for annual pass? How would a lower price affect ridership?)

Employee Transit Subsidy and Pre-Tax Program

\$10 per month subsidy for employees participating in pre-tax program and for passes purchased at P & T

1,600 employees participate

Campus Shuttle – BEAR Transit

860,000 rides annually

Carpools

700 faculty and staff carpool *(City comment: is this number reported in Survey or derived from actual parking management data?)*

350 students carpool

Employee 2 person carpools get 75% price reduction for parking permit

Employee 3+ carpools get 100% price reduction for parking permit

Student carpools get 75% price reduction for parking permit

Vanpools

Free parking for registered vanpools

5 Employee vanpools *(City comment: very low number. Will program be enlarged?)*

P& T is planning improvements in 2004-5 *(City comment: what are new ridership projections?)*

Walking

53% of students commute by walking

8% employees commute by walking

11.2B.7A RESPONSE TO COMMENT LETTER B7A

RESPONSE TO COMMENT B7A-1

This summary serves as an introduction to more detailed comments, below.

RESPONSE TO COMMENT B7A-2

This comment presents the writer’s view of the correct level of analysis for each of three levels of planning, and characterizes the University’s purpose in developing the 2020 LRDP. See Thematic Response 1 for an explanation of how the University views the role of the 2020 LRDP in project level review.

RESPONSE TO COMMENTS B7A-3 AND B7A-4

The comment describes the traffic analysis methodology and significance standards in the Berkeley General Plan EIR. UC Berkeley acknowledges both the different performance measure used (roadway or “link” capacity in the General Plan EIR, versus intersection level of service in the Draft EIR), and the different thresholds of significance applied to traffic impacts. The University and its traffic consultant chose intersection LOS as the traffic performance measure for the Draft EIR because (1) it is considered a more sensitive measure of traffic congestion in an urban environment such as Berkeley, and (2) intersection analysis allows the development of specific mitigation measures to relieve congestion impacts identified in the analysis, whereas roadway capacity analysis allows only the determination that an entire corridor or corridor segment is “over capacity” or “under capacity”, and does not enable formulation of meaningful solutions. This is particularly true in a City such as Berkeley, where wholesale roadway widening is not a feasible option.

For an explanation of the reasoning for the difference in significance thresholds in the two EIRs, please see response B7a-5, below.

RESPONSE TO COMMENT B7A-5

The Draft EIR does not state that it uses the Berkeley General Plan EIR LOS thresholds of significance. Rather, the Draft EIR traffic impact thresholds were developed with the intention of being as consistent as possible with the General Plan EIR thresholds, while accommodating the differing analysis methodologies used (intersection LOS analysis in the Draft EIR versus roadway capacity analysis in the Berkeley General Plan EIR).

Endnote 27 of chapter 4.12, which cites the “common standard ... [in] the General Plan EIR...” refers to the selection of a 5% volume contribution threshold for part of the significance criteria. The Draft EIR’s 5% volume contribution threshold is quantitatively consistent with the threshold used in the Berkeley General Plan EIR; the modification that the Draft EIR makes is to consider cases in which the intersection LOS changes from D or better to E or worse significant even if the increase is less than 5%; if the existing intersection LOS is already E or F, then the LRDP EIR considers the further reduction in service significant if the volume contribution is 5% or greater. The Berkeley General Plan EIR applies the 5% requirement to cases where roadway capacity goes from E or better (e.g. under-capacity) to F or worse (e.g. over-capacity). The modification responds to the fact that LOS D intersection operation is generally considered the lowest acceptable level of operation for intersections, both within the analysis method-

ology, and as applied by most jurisdictions; thus LOS D to LOS E represents the transition from acceptable to unacceptable operation.

With the roadway capacity-based analysis in the Berkeley General Plan EIR, the capacity of a roadway is defined as LOS E or better; thus LOS E to LOS F represents the transition from acceptable to unacceptable. In both EIRs, it is clear that the intention is to require the significance finding to be based on both (1) transition from acceptable to unacceptable operation and (2) a minimum project volume contribution, so that a single project trip would not cause a significance finding. In addition, the modification noted in the comment actually results in the identification of several impacts that would otherwise not be identified, and does not result in the omission of any impacts.

While UC Berkeley believes the rationale for applying the 5% minimum volume in the LOS E-to-F case is appropriate, a check of the LOS results was performed to see if any additional impacts would be identified using the writer's requested approach: namely, that a much lower threshold, 1%, be used along with the LOS E-to-F case. As an examination of Table F.3-3 (Draft EIR Volume 2, page F.3-12) shows, there are no cases where the addition of project traffic changes a LOS from E to F. To be sure, the 2020 LRDP creates several significant impacts where the LOS changes from D or better to E or F, as well as impacts where the LOS remains F and the 2020 LRDP traffic contributes 5% or more of the traffic. This demonstrates that the significance threshold is effective at capturing cases where the LOS changes from acceptable (LOS D or better) to unacceptable (LOS E or F).

RESPONSE TO COMMENTS B7A-6 AND B7A-7

The writer correctly characterizes the non-linear relationship of volume increase to delay increase. The Draft EIR traffic analysis applies methodologies from the Transportation Research Board's publication *Highway-Capacity Manual 2000* (HCM 2000) to evaluate intersection operations. As indicated on page 16-24 of HCM 2000, "Delay becomes sensitive to signal control parameters only at demand levels of about 80 percent of capacity. Once demand exceeds 80 percent of capacity, modest increase in demand can cause significant increases in delay." These increases result from the complex equations used to derive delay. According to HCM 2000, a one percent change in volume-to-capacity represents about an 11 percent change as delay approaches the calculated capacity and a 30 percent change when delay equals or exceeds capacity.

These analytical results do not represent field conditions at congested intersections. Traffic volume levels can vary by as much as 5 to 10 percent throughout the year, while driver perception of delay and level of service remain the same. Both the Berkeley General Plan and the Draft EIR acknowledge the differences between analytical methods and driver perception by identifying a threshold that drivers can distinguish between traffic changes; thus, the use of the 5 percent volume threshold.

RESPONSE TO COMMENT B7A-8

The comment presents the writer's opinion; UC Berkeley concurs that individual projects will require individual consideration and analysis. See Thematic Response 1 regarding tiered environmental review.

RESPONSE TO COMMENT B7A-9

The Draft EIR has identified mitigation measures to alleviate traffic congestion impacts where feasible measures exist, and UC Berkeley is eager to work with the City of Berkeley in the development and implementation of solutions for impact locations where feasible mitigation measures were not identified. The City's Transit First policies, which restrict roadway capacity expansion and support multi-modal solutions, are acknowledged in the Draft EIR at pages 4.12-6 to 4.12-8. The Berkeley General Plan EIR notes that these solutions may not reduce traffic congestion impacts to a less than significant level. The effects of these measures in mitigating traffic impacts therefore cannot currently be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level.

RESPONSE TO COMMENT B7A-10

The writer's statement of the City of Berkeley's intent to monitor traffic congestion and develop solutions based on a mix of capital, operating, and trip reduction measures is noted. Since the City of Berkeley currently has no capital improvements planned for the impact locations identified in 2020 LRDP Impact TRA-8 and TRA-10, the Draft EIR found those impacts to be significant and unavoidable. However, UC Berkeley is eager to work with the City in the development and implementation of solutions, as described in responses B7a-119, B7a-133, B7a-134 and B7a-135.

RESPONSE TO COMMENT B7A-11

Please see response B7a-10 for an explanation of the significant and unavoidable findings. Other improvements, such as increased incentives for trip reduction, may help mitigate the traffic impacts of the 2020 LRDP, but the benefits of such alternatives cannot be quantified at this time: see Thematic Response 10 regarding transportation alternatives. The effects of these measures in mitigating traffic impacts therefore cannot currently be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level.

RESPONSE TO COMMENT B7A-12

See Thematic Response 1 regarding tiered environmental review.

RESPONSE TO COMMENT B7A-13

See Thematic Response 1 regarding tiered environmental review.

RESPONSE TO COMMENT B7A-14

The University agrees there are always margins of error in any model-based traffic forecasting effort for local streets and intersections. However, the writer implies that the Draft EIR unnecessarily adds inaccuracy to the forecasts by "not providing detailed descriptions of the size or location of residential and parking facilities". Here, the University does not agree. These facilities were defined at the finest level possible, given the myriad future factors that will affect the ultimate selection of development sites. UC Berkeley will assess the need for project-level traffic and transportation evaluations when specific projects are proposed, as explained in Thematic Response 1. The assessment will consider the potential differences in traffic volumes in the Draft EIR analysis and those which could result from the project as proposed.

RESPONSE TO COMMENT B7A-15

The writer states “...it appears that the proposed LBNL 2004 LRDP has been included in the baseline scenario, based on the statement in the Draft EIR that the baseline plus project scenario “include(s) all development foreseen under the general plans of each of the jurisdictions as well as the LBNL 2004 LRDP and the 2020 LRDP in the cumulative impact LRDP area...” However, LBNL 2004 LRDP traffic volumes were not part of baseline conditions for the project-specific analysis in the Draft EIR. Rather, the LBNL 2004 LRDP traffic volumes were included in the *cumulative* analysis. See Section 4.2.10 of the Draft EIR. At page 4.12-59, the Draft EIR actually states “... these conditions already take account of **future** baseline conditions that include all development foreseen under the general plans (etc)...” (emphasis added). The University has performed the analysis as described in the City of Berkeley NOP comments, as the Draft EIR cumulative traffic projections do contain the LBNL traffic projections.

The writer appears to expect the LBNL traffic volumes to be shown as a separate project within the cumulative case, but the LBNL traffic is one component of many contributing to the future cumulative traffic volume. Specifically, the Draft EIR cumulative traffic volumes consist of forecast growth throughout the City and region, as projected by the Alameda Countywide Travel Demand Model; LBNL growth; and the University Village project. The LBNL traffic volumes and impacts will be analyzed in the LBNL LRDP EIR.

RESPONSE TO COMMENT B7A-16

The University respectfully disagrees with the writer’s opinion that the approach to cumulative volume accounting makes it impossible to assess the individual impacts of the 2020 LRDP. In fact, the 2020 LRDP traffic volumes are described in great detail in Appendix F.1. Intersection-specific traffic volumes with and without the 2020 LRDP may be found in Appendix F.5. In addition, the University has prepared table 11.2b-1, which summarizes the project volume contribution to each intersection.

RESPONSE TO COMMENTS B7A-17 THRU B7A-19

LBNL 2004 LRDP traffic volumes were not part of baseline conditions for the project-specific analysis in the Draft EIR. See response to comment B7a-5, which further clarifies the sensitivity of the LOS analysis completed for the 2020 LRDP, and B7a-15 regarding analysis of LBNL 2004 LRDP contributions in cumulative conditions.

UC Berkeley concurs that a higher baseline (for example one that includes the LBNL traffic) would make the 2020 LRDP contribution lower. A higher baseline may push an intersection into a different LOS range (e.g. E-F), in which the threshold of significance requires a higher project traffic contribution to be found significant; and a baseline which includes the LBNL LRDP traffic does not allow that traffic to be identified as a separate cumulative project contributing to an impact. However, the LBNL 2004 LRDP and University Village are separate projects undergoing separate CEQA review, not components of the 2020 LRDP: the LBNL 2004 LRDP and the University Village project cannot be considered contributing projects within the Draft EIR. They are separately responsible for analyzing and mitigating project impacts. Please see Thematic Response 6 regarding the relationship of the UC Berkeley 2020 LRDP to LBNL.

RESPONSE TO COMMENT B7A-20

The Draft EIR includes the LBNL 2004 LRDP and the University Village proposals in its cumulative analyses. The writer's contention that separate analyses with and without these projects are required is not supported by CEQA. See Thematic Response 6 regarding the relationship of the UC Berkeley 2020 LRDP to LBNL.

RESPONSE TO COMMENT B7A-21

The traffic analyses for all three EIRs have been coordinated to ensure traffic volumes from each of the three projects – the 2020 LRDP, the LBNL 2004 LRDP, and the University Village project – are included in the traffic projections prepared for the others. Even though LBNL is autonomous from UC Berkeley, staff and consultants worked closely to ensure consistency in some data.

RESPONSE TO COMMENT B7A-22

The Draft EIR, the University Village project, and the pending LBNL LRDP EIR use consistent technical data and assumptions for the future cumulative case. The Draft EIR does not call out University Village EIR impacts. While the University Village project generates less traffic than the 2020 LRDP, a higher proportion of project-related traffic is assigned to nearby intersections at University Village, resulting in project-specific effects uniquely examined in the University Village EIR.

RESPONSE TO COMMENT B7A-23

The writer's assertion that LBNL development generates impacts at the three intersections is noted. LBNL LRDP-related traffic will certainly contribute to traffic growth at these intersections, and the LBNL EIR will identify the impacts at these and other intersections within its study area. See also response B7a-140.

RESPONSE TO COMMENT B7A-24

The comment presents the writer's opinion. See Thematic Response 3 regarding the 2020 LRDP alternatives.

RESPONSE TO COMMENT B7A-25

See Thematic Response 3 regarding the 2020 LRDP alternatives.

The writer further states that new significant parking impacts would not occur "if transportation alternatives were able to transform travel behavior and reduce parking demand sufficiently." The University concurs. However, neither the Berkeley General Plan, the Berkeley General Plan EIR, the 2020 LRDP, the Draft EIR, nor the joint City/University Transportation Demand Management Study indicate what feasible program of transportation alternatives might accomplish this vision. The TDM study presents a full menu of strategies for shifting drivers to alternative transportation. In its Chapter 8, the TDM study also indicates the anticipated effectiveness of each potential strategy. The more effective strategies, such as Transit 3.4, Improve Frequency and Reliability on Core Transit Routes, or Transit 3.5, Implement Transit Preferential Measures on City Streets, are either the more costly, or outside the authority of the University to unilaterally implement.

UC Berkeley is committed to improvement of its alternative transit programs. Given cost and authority constraints, however, improvements implemented by UC Berkeley

are unlikely to result in the scale of mode shift envisioned by the comment. Alternative L-2 appropriately presents the alternative of “no new parking and more transit incentives.”

RESPONSE TO COMMENT B7A-26

The writer suggests an alternative that combines lower enrollment and reduced employment growth with no construction of new parking, in order to minimize the effects of less new parking. However, the effects of less new parking are considered in Alternative L-1, which states “This alternative would therefore also include a lower number of new parking spaces, since the increment of new parking proposed in the 2020 LRDP is derived partly from the existing parking deficit and partly from projections of future demand based on growth in enrollment and employment”. Thus, without limiting growth, Alternative L-2 isolates the effects of less new parking, a controversial part of the 2020 LRDP program, for comparative analysis. See also response B7a-25, above.

Thematic Response 3 presents a comprehensive response to comments on the 2020 LRDP alternatives, including the writer’s assertion the alternatives are “straw men”.

RESPONSE TO COMMENT B7A-27

The writer requests consideration of satellite parking in alternative L-2, but does not explain what impacts satellite parking might address. A satellite parking program may displace traffic impacts to other locations, result in new land use impacts, and result in continuing congestion impacts as vehicles transfer people from a satellite site to campus. Further, satellite parking would not respond to convenience and travel time concerns of staff and faculty. The University’s experience with satellite parking in the 1980s was unsuccessful and unpopular as commuters found their travel time significantly increased. UC Berkeley is eager to meet with City staff and others to discuss options for parking provision, parking regulations, and UC Berkeley collaboration with the City in implementing solutions that would best address parking concerns.

RESPONSE TO COMMENT B7A-28

The joint City/University TDM Study analyzed the mode split required “to accommodate growth without building parking”. The writer is referred to the joint City/University TDM Study, pages ES-10 to ES-11.

RESPONSE TO COMMENT B7A-29

The writer requests additional data regarding vehicle emissions in analysis of alternative L-2. See Thematic Response 3 regarding the level of detail required in alternatives analyses.

RESPONSE TO COMMENT B7A-30

The writer requests additional data regarding stationary source emissions and reduced construction emissions in analysis of alternative L-2. The writer is referred to Table 5.1-4 at page 5.1-4 of the Draft EIR. Alternative L-1 considered emission reductions, including construction emission reductions, from reduced growth, yet emissions remained significant and unavoidable. With no parking construction, but program growth as anticipated in the 2020 LRDP, Alternative L-2 would have similar results. See also Response to Comment B7-99, B7-102, and B7-105 above, and Thematic Response 3 regarding the level of detail required in alternatives analyses.

RESPONSE TO COMMENT B7A-31

Table 4.2-9 of the Draft EIR presents emissions associated with vehicles and various categories of area and stationary sources, both for a year 2000 baseline and the 2020 LRDP increment, for each criteria air pollutant. These can be summed within each emission category for each pollutant to calculate total emissions under the 2020 LRDP. Percent contributions of each category to total 2020 LRDP emissions can also be calculated from this information.

RESPONSE TO COMMENT B7A-32

Qualitative, not quantitative, air quality analyses were completed for each alternative in chapter 5 of the Draft EIR. Thematic Response 3 presents a comprehensive response to comments on the 2020 LRDP alternatives.

RESPONSE TO COMMENT B7A-33

Transit ridership and trip reduction assumptions for alternative L-2 were determined qualitatively, not quantitatively. CEQA provides that the analysis of alternatives need not be presented to the same level of detail as the assessment of the project, and more cursory analyses are common; see, for example, the alternatives analyses in the City of Berkeley General Plan EIR. Further, the Bear Pass program is a pilot program, and it would be speculative to model trip reduction calculations at this time. Thematic Response 3 presents a comprehensive response to comments on the 2020 LRDP alternatives.

RESPONSE TO COMMENT B7A-34

See responses B7a-25, B7a-32 and B7a-33, as well as Thematic Response 3.

RESPONSE TO COMMENT B7A-35

See Thematic Response 9 regarding parking demand.

RESPONSE TO COMMENT B7A-36

The writer suggests additional measures to address parking demand. These and other measures remain part of the menu of demand management strategies available to the City and UC Berkeley to manage parking supply and demand. The effects of these strategies may help mitigate the traffic impacts of campus growth but such benefits cannot be quantified at this time. Accordingly, the effects of these measures in mitigating traffic impacts cannot be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level. The effectiveness of UC Berkeley trip reduction measures will become evident in the mitigation monitoring process. See Thematic Response 2 on mitigation monitoring; see also Thematic Response 10 on trip reduction programs.

RESPONSE TO COMMENT B7A-37

See Thematic Response 9 regarding parking demand.

RESPONSE TO COMMENT B7A-38

Mitigation TRA-11 provides an ongoing review of the relationship of campus parking supply and demand, with the objective of avoiding a mode shift to drive-alone trips as a result of the increase in number of parking spaces.

RESPONSE TO COMMENTS B7A-39 AND B7A-40

See Thematic Response 9 regarding parking demand.

RESPONSE TO COMMENT B7A-41

The Draft EIR text references a suburban “environment” which is the standard condition used in projecting parking demand. Thematic Response 9 compares the parking program in the 2020 LRDP with several other urban research universities, suggested by commentors as having exemplary programs of incentives for alternate transportation modes.

RESPONSE TO COMMENT B7A-42

As noted in the joint City/University Southside/Downtown TDM Study,¹² UC Berkeley has significantly increased its parking fees since 1998, and in academic year 2004-2005, fees will increase 4.5%. The TDM Study also noted that there may be up to 5,000 cars spilling outside the downtown/southside TDM study area and parking in neighborhoods beyond the residential permit parking zone.¹³ While parking permit fee increases may reduce the demand for permits, fee increases may not reduce parking demand.

The writer does not present any facts that indicate the requested analysis is warranted. The City of Berkeley does not regulate the cost of employer-provided parking for private or non-city agencies in the City. Similar to other employers, the University considers parking pricing in the context of other employee costs and compensation. Resource pricing is not within the scope of the 2020 LRDP and, given that pricing does not directly impact the environment, it is not within the scope of CEQA.

RESPONSE TO COMMENTS B7A-43 THRU B7A-45

See Thematic Response 9 for a discussion of parking demand and the rationale for added parking.

The parking space count at the end of 2001-2002 was 7,150 spaces (including 250 motorcycle spaces), or 300 spaces less than the 7,450 existing spaces cited in the 1990-2005 LRDP EIR for March, 1989.¹⁴ Thus, none of the 1,000 spaces anticipated under the 1990 LRDP have been developed. As explained in Thematic Response 9, the estimated total demand for 9,990 spaces in 2020 as a result of the 2020 LRDP takes into account the 790 completed and CEQA reviewed spaces cited in table 3.1-2 of the 2020 LRDP.

RESPONSE TO COMMENT B7A-46

The intent of the figures in table 3.1-3 is clearly explicated in the text, but the writer notes correctly the paragraph above the table should refer to both parking and program space. In the Final EIR the text at page 3.1-22 has been revised to read:

In order to provide the campus some flexibility in locating new projects, the sums of the maxima for the individual land use zones are roughly 10% greater than the 2020 LRDP totals of 2,200,000 net new GSF of program space and 2,300 net new parking spaces. However, the total net new program space and parking within the scope of the LRDP may not substantially exceed 2,200,000 GSF or 2,300 spaces without amending the 2020 LRDP.

RESPONSE TO COMMENTS B7A-47 THRU B7A-52

In Table 3 of the comment letter, the writer presents an analysis that omits consideration of UC parking demand at non-UC parking lots and in residential neighborhoods.

See Thematic Response 9 regarding parking demand and the rationale for the 2020 LRDP parking program.

RESPONSE TO COMMENT B7A-53

The data on the downtown parking deficit identified in the Vista College FEIR is presented as contextual information to help the reader evaluate parking conditions in Berkeley. The purpose of the 2020 LRDP parking program is not, as the writer contends, to “... help meet an estimated shortage of regular downtown parking ...” but rather to help accommodate “... University-related vehicle trips that currently park on-street or at non-University facilities.”

RESPONSE TO COMMENT B7A-54

The number of commuter spaces is taken from table 4.12-3: the “total vehicle spaces” in the same table is consistent with the “actual 2001-2002” figure in table 3.1-2. While the exact number of commuter spaces in 2020 would reflect the actual need at the time, the writer’s general assumption that the vast majority of additional spaces beyond the 2001-2002 inventory (790 + 2,300) would be allocated to commuters is correct.

With respect to the relationship of the 1,300 space “current deficit” to the over 3,500 space “unmet demand”, the former figure refers to the difference between what the University presently provides and what it *should* provide to adequately meet its mission. The latter number should more correctly be termed “latent demand”, and should not be the overly approximate “over 3,500” but 4,300, as explained on page 4.12-18. This figure is similar to the 4,100 space latent demand cited in the City/University Southside/Downtown TDM Study. The Final EIR has been revised to make this correction.

RESPONSE TO COMMENT B7A-55

See Thematic Response 9. If the 2020 LRDP were truly based on the suburban campus model, as the writer contends, the parking program for the 2020 LRDP would be much, much larger. Rather, the information on latent demand, which is consistent with the City/University TDM Study, is presented merely as evidence the number of drivers is likely far greater than those accommodated in University parking facilities.

The 2020 LRDP program, however, as explained in Thematic Response 9, is based not on a suburban model, but on the real-world current behaviors of UC Berkeley students and workers, and on the objectives of the 2020 LRDP. As also shown in Thematic Response 9, the ratios of parking spaces to student headcount, even after full implementation of the 2020 LRDP, would be comparable to or lower than current ratios at several urban research universities with exemplary transit incentive programs.

RESPONSE TO COMMENT B7A-56

The writer is mistaken: the University does not intend to “compete” with existing City and private facilities, but rather to accommodate the demand it generates through its own mission.

RESPONSE TO COMMENT B7A-57

As the writer notes in comment B7a-138, below, section 3.1.9 states at page 3.1-28: “... to the extent we are able to reduce [drive-alone] ratios, through demand reduction initiatives and through construction of new student housing, the [parking] objective would be adjusted to reflect these changes.” Mitigation TRA-11 provides an ongoing

review of the relationship of campus parking supply and demand, with the objective of avoiding a mode shift to drive-alone trips as a result of the increase in number of parking spaces. Changes in demand due to the student housing program would be incorporated into this review.

RESPONSE TO COMMENT B7A-58

The boundaries of the Adjacent Blocks are defined in the text of section 3.1.2.

RESPONSE TO COMMENT B7A-59

The specific locations of future parking facilities are not yet known. However, as described in section 3.1.7, "... University-owned land will always be the first option explored for both program space and parking."

RESPONSE TO COMMENT B7A-60

The proposed Underhill facility is located in the Southside, not in the Adjacent Blocks.

RESPONSE TO COMMENT B7A-61

The traffic analysis includes consideration of the points raised by the writer.

RESPONSE TO COMMENT B7A-62

The writer's comments are noted. It is not the intent of the University to consign any area to a "parking ghetto". Apart from the fact the quality and vitality of City life are of the greatest importance to UC Berkeley, land on and around the campus is just too scarce and valuable to devote a large percentage of it to parking alone. Most of the new parking under the 2020 LRDP is anticipated to be constructed as part of larger, mixed-use projects on the same or adjacent sites. In this context, it is worth noting the proposed ratio of new parking to new program space in the 2020 LRDP reflects a ratio of roughly 1.05 spaces per thousand gsf, compared to the ratio of 1.5 spaces per thousand gsf required by City zoning for the downtown.¹⁵

RESPONSE TO COMMENT B7A-63

See response B7a-27, above, regarding consideration of satellite parking alternatives.

RESPONSE TO COMMENT B7A-64

See Thematic Response 5 regarding the use of qualifiers such as "substantially exceed". Further, as noted in Thematic Response 9, UC Berkeley may defer some portion of the 2020 LRDP parking program in recognition of AC Transit's BRT/Telegraph project.

RESPONSE TO COMMENTS B7A-65 AND B7A-66

The writer's opinion that the ratio of existing UC parking spaces to permits should be seen as "effective distribution" rather than "undersupply" is noted. To the extent this is a comment on the 2020 LRDP parking program, the University notes this program is intended to address the objectives of the 2020 LRDP and the principles of its underlying Academic Plan, as described in section 3.1.9. Also, a similar condition of "effective distribution" was in effect when the City implemented the Residential Permit Parking program in some City neighborhoods in 1989, indicating that the City is not itself insensitive to concerns of undersupply. The Berkeley Municipal Code findings related to the preferential parking program state in part: "Since there is in Berkeley at any one time a large surplus of motor vehicles over available on- and off-street parking spaces, this condition detracts from a healthy and complete urban environment".¹⁶

UC Berkeley is considering the implementation of real time parking information technologies. A few existing lots are being retrofitted with control systems that could provide real time parking information.

RESPONSE TO COMMENT B7A-67

The University does not expect the 2020 LRDP programs to result in campus-wide changes that would create more peak hour travel. In fact, as part of the Bay Area region, UC Berkeley workers and students are influenced by the same factors that have generated an upward trend in off-peak travel, including traffic congestion, parking availability, and greater use of flexible work schedules. Please see Thematic Response 9 regarding parking demand, and LRDP Mitigation Measure TRA-11.

RESPONSE TO COMMENT B7A-68

See response B7a-42.

RESPONSE TO COMMENT B7A-69

The writer's opinion that "customer grumbling is not the same thing as a real parking shortage problem" is noted. Please see response B7a-66.

RESPONSE TO COMMENTS B7A-70 AND B7A-71

The writer suggests a parking wayfinding system with dynamic signing to reduce the need for additional parking. These and other measures remain part of the menu of demand management strategies available to the City and UC Berkeley to manage parking supply and demand. The effects of these strategies may help mitigate the traffic impacts of campus growth but such benefits are not known at this time. Consequently, the effects of these measures in mitigating traffic impacts cannot be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level. The effectiveness of UC Berkeley trip reduction measures will become evident in the mitigation monitoring process. See Thematic Response 2 on mitigation monitoring; see also Thematic Response 10 on trip reduction programs.

RESPONSE TO COMMENT B7A-72

As noted by the writer, the BRT/Telegraph project presents an opportunity to increase the use of alternative modes. Thematic Response 9 presents a comprehensive response to comments on parking demand, including the writer's assertion of "contradictory policies". Further, as noted in Thematic Response 9, UC Berkeley may defer some portion of the 2020 LRDP parking program in recognition of AC Transit's BRT/Telegraph project.

RESPONSE TO COMMENT B7A-73

The Draft EIR parking analysis is based on the most current and *complete* inventory of parking supply and demand within the study area at the time the NOP was prepared, which was the Southside/Downtown TDM study data. Please see also response B7a-74.

RESPONSE TO COMMENT B7A-74

Table 4.12-5 shows a 100% afternoon parking occupancy for the Sather Gate Garage, based on data on page 7-5 of the Downtown/Southside TDM Study Existing Conditions Report. Appendix D of the Library Gardens Draft EIR shows a 34% afternoon parking occupancy for the Sather Gate Garage. The Library Gardens parking occupancy survey was conducted in summer 2002, while the data presented in the TDM Study were

TABLE 4.12-5

PARKING SUPPLY AND DEMAND AT MAJOR NON-UNIVERSITY PARKING FACILITIES

Parking Facility	Parking Supply	Weekday Demand		Saturday
		Afternoon ^a	Night ^b	Afternoon Demand ^c
Berkeley Way Lot	113	94%	76%	68%
Center Street Garage	435	89%	31%	41%
Allston Way Garage	630	95%	42%	24%
Kittredge Street Garage	362	76%	51%	51%
Oxford Street Lot	132	91%	93%	95%
Sather Gate Garage	441	100%	17% ^d	38% ^d

^a Based on data collected by Fehr & Peers Associates on November 6, 2001 between 2:00 p.m. and 3:00 p.m. for all parking facilities except Sather Gate Garage. Parking for the Sather Gate Garage is from the *Downtown/Southside TDM Study, Existing Conditions Report*, April 2000, page 7-5.

^b Based on data collected by Fehr & Peers Associates on April 10, 2002 between 7:00 p.m. and 8:00 p.m., except where noted.

^c Based on data collected by Fehr & Peers Associates on April 13, 2002 between 2:00 p.m. and 3:00 p.m., except where noted.

^d Source: *Library Gardens DEIR*, Appendix D, June 2003. Capacity for the Sather Garage in the DEIR is listed as 685, which contributes to low occupancy percentages. The City of Berkeley Office of Transportation's website, however, lists 436 as the capacity (<http://www.ci.berkeley.ca.us/transportation/Parking/OffStreet.html>, 10/15/04). Comparable percentages based on a capacity of 441 would be approx. 26% for weekday night and 59% for weekend mid-day.

Source: Fehr & Peers Associates, January 2003.

collected prior to 2000. Although the Library Gardens data are more recent, they were collected during the summer months when attendance at UC Berkeley is much lower than during the regular terms. Thus the Library Gardens report underestimates parking demand generated by UC Berkeley, and the TDM Study represents a more accurate parking demand.

Table 4.12-5 is revised as requested.

RESPONSE TO COMMENT B7A-75

The writer's comment is noted. The sentence at page 4.12-22, second full paragraph, has been revised in the Final EIR to read:

Parking is more available ~~Lower demand occurs~~ because UC Berkeley parking supplies are available to the public on nights and weekends ~~and~~, on-street parking time limit restrictions are not enforced, and commuters have largely departed the area.

RESPONSE TO COMMENTS B7A-76 AND B7A-77

See Thematic Response 10 regarding trip reduction programs. See also response to comment B7a-150.

RESPONSE TO COMMENT B7A-78

See Thematic Response 10 regarding trip reduction programs. See also responses to comment letter B4. UC Berkeley is eager to work with the City of Berkeley to implement programs that would increase transit ridership and reduce congestion. Creating effective systems includes reducing costs by eliminating duplicate services between agencies and creating pass programs that allow customers to use services interchangeably. These efficiencies may very well increase capacities for new users and provide quicker and more direct service to customers. Most recent efforts include:

- Employees with UC ID cards and UCOP employees can now ride the shuttles free without a separate pass.
- UC, the City and AC Transit have improved transit stop shelters throughout the campus.
- P & T redesigned the Hill and S lines and created one line that will provide Hill employees with direct service from BART throughout the day.
- UCB has initiated discussions with LBNL to explore combining services to reduce costs and improve coverage.
- UCB has had discussions with the state Department of Health Services, Kaiser and others in Richmond on the possibility of combining shuttle service with the RFS shuttle. These discussions have expanded to AC Transit - as part of AC's proposed improvements to West Contra Costa transit lines there is discussion about an AC Transit line operating between campus and RFS more frequently than the current shuttle.
- The Bear Pass for AC Transit will provide employees the ability to use both AC and the shuttles interchangeably for more frequent and direct service. This will become more important with AC Transit's proposals for changes to West Contra Costa county service and the implementation of BRT.
- UCB has been participating in a regional shuttle provider group, BAYCAP, for several years to strategize on shuttle program improvements.

RESPONSE TO COMMENT B7A-79

The noted sections are part of the “existing setting” information presented in the Draft EIR for contextual information. The writer’s opinion that there should be additional analysis of data presented is noted. The CEQA guidelines support “mentioning only briefly issues other than significant ones in EIRs” (CEQA Guidelines 15006, 15143). Safety improvements will be a study component in the pending bicycle access plan. See Response to Comment C13-1.

RESPONSE TO COMMENT B7A-80

UC Berkeley is eager to meet with City staff and others to discuss options for bicycle planning. UC, City and community representatives consistently participate in one-another’s bicycle committees and planning charettes. City and UC transportation planners confer frequently.

RESPONSE TO COMMENT B7A-81

Following the introduction of the Class Pass in 1998, transit use by students increased from 14% in 1997 to 23% in 2000. However, a substantial percentage of this increase appears to have come at the expense of bike users and walkers and others: bike use declined from 14% to 9% while walkers and others declined from 58% to 56%. Drive-alone commuters declined from 13% to 11%. In other words, increased transit use due

to the Class Pass may account for roughly 15% of student drive-alone trips. Other factors such as parking fee, parking availability, campus housing availability, rainy vs. dry winter, etc can all influence driving rates year to year.

RESPONSE TO COMMENTS B7A-82 AND B7A-83

The writer seems to suggest that, of factors including UC Berkeley's trip reduction program, the urban context, existing conditions, and the City's bicycle network, only UC Berkeley's trip reduction program is not a causal factor in influencing travel behavior.

Programs adopted at other universities may help mitigate the traffic impacts of campus growth but such benefits are not known at this time. Accordingly, the effects of these measures in mitigating traffic impacts cannot be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level. The effectiveness of UC Berkeley trip reduction measures will become evident in the mitigation monitoring process. See Thematic Response 2 on mitigation monitoring; see also Thematic Responses 9 on parking demand and 10 on trip reduction programs.

Thematic Response 9 presents data comparing the parking program in the 2020 LRDP with parking inventories at several other urban research universities, suggested by commentors as having exemplary programs of incentives for alternate transportation modes, including the two examples suggested by the writer.

RESPONSE TO COMMENT B7A-84

The joint City/University TDM Study included a chapter on Commute Trends. See Chapter 5 of the Existing Conditions Report.

RESPONSE TO COMMENT B7A-85

With the implementation of the Bear Pass this fall, transportation planners estimate that 127 employees will give up parking permit/drive alone and use AC Transit. This would change the drive alone rate from 2001 faculty/staff Housing and Transportation survey from 51.3% to 50.1%.

RESPONSE TO COMMENT B7A-86

See response B7a-81, above. Although UC Berkeley policies seek to minimize automobile use by students, some students have life circumstances that require an automobile. A very limited number of residential permits are available to residents of University student housing with a demonstrated medical, employment, academic or other need: Best Practice TRA-2 at page 4.12-45 states this policy would continue under the 2020 LRDP. Other students are only eligible for student commuter parking permits if they live beyond a two mile radius of campus.

RESPONSE TO COMMENT B7A-87

The information requested is readily available in the joint City/University TDM Study. The CEQA Guidelines support "preparing analytic rather than encyclopedic environmental impact reports" (CEQA Guidelines 15006). The requested information need not be reprinted as part of the Draft EIR.

RESPONSE TO COMMENT B7A-88

The writer requests additional analysis of existing programs to reduce vehicle trips, and suggests additional programs. Please see responses B7a-25 and B7a-36, above. See also Thematic Response 10 on trip reduction programs.

RESPONSE TO COMMENT B7A-89

The writer suggests UC Berkeley examine additional measures to reduce parking demand, including supporting increased alternative travel by the general public. Accordingly, as noted in Thematic Response 9, UC Berkeley may defer some portion of the 2020 LRDP parking program in favor of AC Transit's BRT/Telegraph project, which could reduce parking demand by increasing alternative travel by students, staff, faculty, and the general public.

Other measures remain part of the menu of demand management strategies available to the City and UC Berkeley to manage parking supply and demand. The effects of these strategies may help mitigate the traffic impacts of campus growth but such benefits are not known at this time. Therefore, the effects of these measures in mitigating traffic impacts cannot be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level. The effectiveness of UC Berkeley trip reduction measures will be apparent in the mitigation monitoring process. See Thematic Response 2 on mitigation monitoring; see also Thematic Response 10 on trip reduction programs.

RESPONSE TO COMMENT B7A-90

The writer's opinion is noted.

RESPONSE TO COMMENT B7A-91

In FY 2002-03 the Carpool and New Directions programs grew by 515 employee participants. Of these 515 employees, 177 employees gave up their single user parking permits and over 75 were new employees. See also Thematic Response 10, Transportation Alternatives.

RESPONSE TO COMMENT B7A-92

Please see Draft EIR Volume 2, Appendix F, pages F.1-13 through F.1-17.

RESPONSE TO COMMENT B7A-93

The Draft EIR clearly explained that the analysis of this impact presents a very conservative interpretation of local and regional growth projections: namely, that all growth associated with 2020 LRDP implementation is in addition to, rather than a subset of, anticipated regional growth. Under this assumption, no matter how small the growth associated with the 2020 LRDP might become, the impact -- the possibility that the 2020 LRDP presents a hindrance to attainment of the Clean Air Plan -- would remain the same.

Since campus growth may not be consistent with the most recent Clean Air Plan, operational emissions under the 2020 LRDP were found to result in a potentially significant and unavoidable impact, because "plan level" emissions pose a "significant and unavoidable impact" in terms of the 2020 LRDP's potential interference with regional air quality management efforts. However, as stated in the text, operational emissions projections under the 2020 LRDP were provided in table 4.2-9 for informa-

tional purposes. The applicable BAAQMD emission thresholds are 80 lb/day for nitrogen oxides (NO_x), reactive organic gases (ROG), and particulate matter less than 10 microns in diameter (PM₁₀), and 550 lb/day for carbon monoxide (CO).¹⁷ See also Response to Comment B7-107, which describes CO emission thresholds for mobile sources, and revised page 4.2-18 of the Draft EIR.

Although these thresholds are not appropriate for assessing “plan level” emissions, and therefore do not need to be included in table 4.2-9, the University believes it is relevant to point out that the projected operational emissions under the 2020 LRDP are relatively low compared to BAAQMD project-level thresholds: thus the magnitude of the overall 2020 LRDP impact on regional air quality may not be great. Yet, a significant and unavoidable impact was found. (This discussion also appears at B7-99.) Further, LRDP Impact AIR-5 mirrors a finding made in the Berkeley General Plan EIR, as noted in the Draft EIR at page 4.2-11.

RESPONSE TO COMMENT B7A-94

UC Berkeley, under the leadership of the Environment, Health and Safety office, is convening a focus group to implement the use of biodiesel and other alternative fuels. UC Berkeley complies with the Energy Policy Act of 1992 (EPAct) which requires that 75% of all new vehicles purchased weighing less than 8,500 lbs., except emergency vehicles, to be alternatively fueled vehicles. Campus strategies to comply with EPAct are the purchase of flex fuel vehicles that run on gasoline or ethanol and to begin operating campus vehicles on biodiesel. In addition, campus department use of electric vehicles and Segways is expanding and several electric vehicle-charging stations are provided for campus commuters.

RESPONSE TO COMMENT B7A-95

Please see response B7a-93, above, for a discussion of findings regarding consistency of the 2020 LRDP with the Clean Air Plan.

RESPONSE TO COMMENT B7A-96

Please see response B7-106 and B7a-94. The campus is also completely replacing its shuttle fleet with newer leased diesel buses provided by AC Transit. The gasoline buses leased by AC Transit to UCB meet current CARB standards. Complete conversion to leased vehicles should be accomplished this fiscal year.

RESPONSE TO COMMENT B7A-97

While the program of new University housing within the Housing Zone may serve to reduce the percentage of students who drive alone, the purpose of the Housing Zone is primarily to support the principles of the UC Berkeley Strategic Academic Plan: namely, as explained in section 3.1.8, to provide students with the community of peers and mentors, and the access to campus resources, they need to excel. Since only around 11 percent of students currently drive alone, it is not yet possible to assess the impact of this new housing on travel modes. However, as noted at page 3.1-28 of section 3.1.9, “... to the extent we are able to further reduce [drive-alone] ratios, through demand reduction and through construction of new student housing, the [parking program] would be adjusted to reflect these changes.”

In estimating transit trip time for the purpose of defining the Housing Zone, a uniform ten minute walk to Doe Library from the closest AC Transit stop was assumed. The

downtown BART station should fall roughly within this estimate for most commuters, although it is slightly further from Doe Library than most downtown AC Transit stops.

RESPONSE TO COMMENT B7A-98

See response B7-28. The twenty minute criterion includes time on the transit vehicle for trips with no required transfers, plus the aforementioned walking time. In fact, the original Housing Zone was larger, because it used the criterion of a 20 minute transit trip to the edge of campus. As the result of comments received from ASUC during the scoping process, however, the zone was reduced to its present dimensions. The objections of the ASUC had to do with both a more realistic measure of travel time, to include the walk from transit stop to destination, and the impact of physical dispersion on intellectual community. UC Berkeley finds the arguments of the ASUC to be persuasive, and the Housing Zone should remain as presently defined.

RESPONSE TO COMMENT B7A-99

As noted in the caption, figure 3.1-5 is generalized, is based on AC Transit routes of July 2003, and does not show "... suitable sites within one block of some BART stations [which] may also qualify for inclusion in the zone." The writer is correct in anticipating the zone boundaries could change over time in response to service changes; however this would not change the definition of the zone itself, which is based on travel time. Future improvements in travel time due to BRT would be taken into consideration in adjusting the Housing Zone boundary. The caption to figure 3.1-5 has been revised in the Final EIR to clarify the distinction.

The traffic analysis is based on the Housing Zone as defined based on AC Transit routes and service in place at the time of the Notice of Preparation (summer 2003). Based on the methodology used to account for trips generated by University housing within the Housing Zone, adjusting the boundaries to reflect the December 2003 service deployment plan would not affect the traffic volume projections at the study intersections.

RESPONSE TO COMMENT B7A-100

The Alameda County Countywide Travel Demand Model used for the 2020 Without Project conditions analysis does not include any growth in enrollment or employment for the University and thus represents the Without Project condition.

RESPONSE TO COMMENT B7A-101

The 2020 Without Project volumes were developed by adding the traffic growth between the 2005 and 2025 ACCMA models to 2002 intersection counts. Although the LRDP covers 18 years of growth (2002 to 2020), the future volumes developed for the 2020 Without Project conditions represent 20 years of traffic growth (2005 to 2025). Thus, by including two years of additional growth in the background traffic, a more conservative 2020 Without Project condition is presented. This methodology has been reviewed and approved by CMA staff as a conservative approach to estimate 2020 Without Project intersection volumes. Furthermore, since the 2020 LRDP only covers growth up to the year 2020, a 2025 analysis is not necessary. See also Response to Comment B7a-16.

RESPONSE TO COMMENT B7A-102

The 2020 Without Project analysis presented in the Draft EIR is based on the City of Berkeley land use data developed by HEG, in consultation with City staff, for the

Telegraph Avenue BRT project, and represents the latest available land use projections for the City of Berkeley. This methodology has been reviewed and approved by CMA staff. A table listing the land uses by traffic analysis zone is included in Appendix F.4. However, please note the table erroneously shows employment growth in four campus zones: 20, 22, 25 and 401. This growth was eliminated in the actual model runs, so that the traffic growth from the 2020 LRDP could be added separately, as described in Appendix F.1.

RESPONSE TO COMMENTS B7A-103 AND B7A-104

The 2020 Without Project analysis presented in the EIR was completed using the “Modified April 2003” model as described in the EIR. Upon receiving the updated CMA model in March 2004, the land use inputs and model results were compared. The major change in the updated model, within the LRDP study area, is the employment re-allocation in Berkeley. In comparison to the “Modified April 2003” model, the March 2004 CMA model has more jobs in West Berkeley and less in Southside, Downtown, and South Berkeley in both 2005 and 2025.

The net land use growth in the updated model is similar to the model used in the EIR. With the exception of the Southside and Downtown areas, both land use data sets use identical residential land uses within the City of Berkeley. The “Modified April 2003” model shows a growth of about 2,700 residential units between 2005 and 2025. The March 2004 model shows a growth of 2,400 residential units for the same period.

The March 2004 model land use includes a growth of about 6,900 jobs between 2005 and 2025, while the “modified April 2003” model has a growth of about 4,900 jobs. However, the land use in the “modified April 2003” data set does not include any employment growth on the UC campus, while the updated CMA model includes about 1,000 additional jobs on the Campus Park. Subtracting these out in order to compare to the Modified April 2003 model (since it was adjusted to include no campus growth), the difference is only 5,900 (March 2004) vs 4,900 (modified April 2003).

The cumulative volumes developed for the 2020 LRDP analysis are based on the traffic growth between the 2005 and 2025 model results. Since the land use changes were made to both 2005 and 2025 land uses, the 2005 to 2025 net volume growth in the updated CMA model runs and “modified April 2003” model runs have similar patterns and magnitudes. Thus any potential changes to the furnished and balanced intersection turning volumes would be very small and would not change the final analysis results.

RESPONSE TO COMMENT B7A-105

The Existing Plus Project case is not a meaningful scenario to analyze when the project is a 15-year plan, because other development can be reasonably expected within the 15-year implementation period of the plan. With such long-range plans, the other growth must be included within the analysis to ensure that realistic traffic volumes are analyzed and the full extent of future congestion is disclosed. Similarly, in its General Plan Update EIR the City of Berkeley used the Alameda Countywide Travel Demand Model forecasts, thus including regional growth outside Berkeley. Caltrans did not comment on this approach in its Draft EIR comment letter dated June 1, 2004.

RESPONSE TO COMMENT B7A-106

In 2004-2005 UC Berkeley will begin developing the first campus bicycle access plan with a grant from the Alameda County Transportation Improvement Authority. Under the 2020 LRDP, as stated in section 3.1.13, UC Berkeley would "... partner with the City and LBNL on an integrated program of access and landscape improvements at the campus park edge." The goals of this policy are to improve safety, functionality, amenity, access and service on streets linking the campus to the adjacent blocks.

RESPONSE TO COMMENT B7A-107

The Draft EIR analyzes the 2020 LRDP, which includes the policy outlined above. The writer's assertion that an increase in bicyclists should be considered a significant impact is noted.

RESPONSE TO COMMENT B7A-108

The writer is referred to the aforementioned 2020 LRDP policy in section 3.1.13; see also response B7a-106, above. In April 2000 the joint City/University TDM Study Existing Conditions Report indicated anticipated growth at UC Berkeley (page ES-1); and the 2001 joint City/University TDM Study (page ES-6), noted the campus anticipated growth in students, faculty and staff. The Underhill Area Projects EIR published in April 2000 indicated UC Berkeley would be asked to grow by 4,000 students (page IV.G-2).

The Berkeley General Plan Final EIR assumed an increase of 5,635 new jobs on and in the vicinity of campus between 2000 and 2020 (page 418); and the fact UC anticipated enrollment growth of 4,000 students appears in UC Berkeley's response to the General Plan EIR published in June 2001 (see, for example, letter A-7 in the Berkeley General Plan Final EIR). The University therefore assumes the writer does not mean to imply that UC growth is unforeseen by the City of Berkeley. Berkeley General Plan policies further indicate that bicycling is considered desirable by the City of Berkeley: see for example General Plan Policy T-45, regarding bicycle promotion: (<http://www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/transportation.html> 7.8.04).

UC Berkeley is eager to continue its work with the City of Berkeley to improve conditions for bicyclists in Berkeley.

RESPONSE TO COMMENT B7A-109

The 2020 LRDP includes a policy to improve bicycle access in partnership with the City of Berkeley, as noted in response B7a-106, above. Campus programs have capacity to accommodate the estimated increase in bicycling. As noted above, the Berkeley General Plan EIR assumed growth for the area that included the campus; no significant bicycle capacity issues were noted in the Berkeley General Plan EIR. Therefore, the University believes the capacity conclusions in the Draft EIR are supported.

The writer's recommendations regarding UC Berkeley injury prevention programs for bicyclists, and the suggested scope of UC Berkeley bicycle planning, are noted, and will be considered in on-going bicycle planning activities for the Berkeley campus.

RESPONSE TO COMMENT B7A-110

Continuing Best Practice TRA-2 defines the limited conditions under which residents of University-operated student housing would be eligible for UC Berkeley parking permits. However, the writer contends this is not itself adequate to minimize student vehicle use, since students could obtain residential parking permits and park their vehicles on City streets. The writer cites the present City of Berkeley practice of denying residential parking permits to residents of University-operated residence halls, and asks if the University agrees this should be continued in new housing.

The University looks forward to working with the City of Berkeley on this issue, although the issue is not as clear cut for future housing built under the 2020 LRDP since, unlike existing residence halls, some of this new housing may be built much further from the campus, in less congested areas. While the University shares the desire of the City of Berkeley to limit student vehicle use, students should not be unreasonably denied the same privileges their neighbors enjoy simply because they are students. Specific conditions within the Housing Zone may create the potential for localized impacts, which future project-specific CEQA review would disclose.

The writer's comment that "It is naive in the extreme to assume that simply meeting the zoning requirements for off-street parking at residential developments will not increase the demand for on-street parking" is noted. If the City were to develop parking criteria that applied equally to all new housing developments in the City, the University would consider applying the criteria in housing it develops under the 2020 LRDP.

RESPONSE TO COMMENT B7A-111

This comment incorrectly summarizes the conclusion of the Draft EIR. Construction period circulation impacts are considered less than significant, given that proposed development under the 2020 LRDP would not exceed existing conditions, and given the incorporation of continuing best practices. See pages 4.12-45 to 4.12-47. UC Berkeley anticipates continuing improvements in construction coordination with the City of Berkeley, to reduce impacts to neighbors as much as possible.

RESPONSE TO COMMENT B7A-112

The writer's support for UC Berkeley efforts to reduce parking-related construction impacts is appreciated. The Draft EIR found such impacts to be less than significant. See page 4.12-47.

RESPONSE TO COMMENT B7A-113

Currently, ridership numbers are collected daily; user surveys are conducted annually. Service adjustments are continually implemented. See Thematic Response 10.

RESPONSE TO COMMENT B7A-114

See Thematic Response 10 regarding alternative transit programs, including improvements to the Bear Shuttle. See also response B7a-27 regarding satellite parking facilities.

RESPONSE TO COMMENT B7A-115

Although not information required for CEQA, UC Berkeley notes that the projected 2004/2005 RFS shuttle expense is expected to be \$177,000 to carry 25,000 passengers a year. Cost per passenger \$7.00 – Farebox Recovery per passenger \$1.00. See also Thematic Response 10 regarding the campus shuttle program.

RESPONSE TO COMMENT B7A-116

The writer's opinion is noted. See Thematic Response 1 regarding the role of the 2020 LRDP in project level review. See also Thematic Response 4 regarding fiscal impacts.

RESPONSE TO COMMENT B7A-117

Please see response B7a-9, above. The writer's statement that "... the University states that it has no financial obligation to address the congestion ..." is unsupported; this language does not appear in the Draft EIR. In accordance with CEQA, the University would participate in feasible mitigations that reduce substantial adverse significant effects of University development upon the environment to less than significant levels. Additionally, UC Berkeley is eager to work with the City of Berkeley to reduce congestion and improve traffic conditions in Berkeley.

RESPONSE TO COMMENT B7A-118

The writer's opinion that \$3.8 million in improvements could reduce traffic impacts identified at LRDP Impacts TRA-8 and TRA-10 to an acceptable level is noted. UC Berkeley is eager to work with the City of Berkeley to reduce congestion and improve traffic conditions in Berkeley.

RESPONSE TO COMMENT B7A-119

Please see responses B7a-117 and B7a-118.

RESPONSE TO COMMENT B7A-120

See Thematic Response 1 regarding the role of the 2020 LRDP in project level review.

RESPONSE TO COMMENT B7A-121

The writer misrepresents the University's position in this comment.

RESPONSE TO COMMENT B7A-122

Please see responses B7a-70 and B7a-71.

RESPONSE TO COMMENT B7A-123

See response B7a-67, above.

RESPONSE TO COMMENT B7A-124

UC Berkeley, under the leadership of the Environment, Health and Safety office, is convening a focus group to implement the use of biodiesel and other alternative fuels.

RESPONSE TO COMMENT B7A-125

See Thematic Response 10 regarding current UC Berkeley programs for car sharing. Inclusion in future housing projects would certainly be encouraged if feasible.

RESPONSE TO COMMENT B7A-126

See Thematic Response 4 regarding fiscal impacts. The writer implies that adequate funds may not be available to pay for required improvements. The EIR authors know of no data that might support this negative prediction, nor is any such past example described by the writer.

RESPONSE TO COMMENT B7A-127

The writer's comment is noted.

RESPONSE TO COMMENT B7A-128

See Thematic Response 4. Fiscal impacts are not within the scope of CEQA. However, the University recognizes they are a matter of concern to Berkeley and other cities and service agencies. They are also a matter of concern to the University, which depends on the adequacy and quality of public services those cities and agencies provide. In response to the publication of the recent City of Berkeley fiscal impact study, the University and the City of Berkeley have designated teams of staff representatives to meet, review and critique the study findings, and identify strategies that benefit both parties.

RESPONSE TO COMMENT B7A-129

The writer's opinion that the University should fund improvements based on baseline contributions as well as 2020 LRDP-related traffic is noted. See Thematic Response 4.

RESPONSE TO COMMENT B7A-130

The writer's opinion is noted. UC Berkeley is eager to work with City staff to implement solutions that would address congestion; however, an ongoing "fair share" commitment to unidentified measures of unknown effectiveness is not required by CEQA.

RESPONSE TO COMMENT B7A-131

The writer opines that "fair share" should apply to capital improvements not yet identified. The effect of such improvements may help mitigate the traffic impacts of the 2020 LRDP, but such benefits are not known at this time. Accordingly, the effects of these measures in mitigating traffic impacts cannot presently be assumed and cannot be used as a rationale for identifying a potential impact as mitigated to a less than significant level. UC Berkeley is eager to work with City staff to implement solutions that would address congestion; however, an ongoing "fair share" commitment to unidentified measures of unknown effectiveness is not required by CEQA.

If the City of Berkeley at its discretion proposes to implement measures that are feasible, that reduce significant unavoidable impacts identified in the Draft EIR to less than significant levels, and that have no new environmental impacts of their own, the University would contribute fair share funding as provided in Mitigation Measure TRA-6.

RESPONSE TO COMMENT B7A-132

The University supports City of Berkeley goals to provide appropriate and balanced solutions to congestion. As summarized in the Draft EIR at page 4.12-7, however, the Berkeley General Plan EIR found that build-out under the General Plan could result in significant traffic impacts despite City policies. The City's Transit First policies, which restrict roadway capacity expansion and support multi-modal solutions, are acknowledged in the Draft EIR at pages 4.12-6 to 4.12-8. The Berkeley General Plan EIR notes that these solutions may not reduce traffic congestion impacts to a less than significant level. See also response B7a-25, above.

RESPONSE TO COMMENT B7A-133

If the City of Berkeley at its discretion proposes to implement alternative mitigation measures that are feasible, that are the functional equivalent of those proposed in the Draft EIR, and that have no new environmental impacts of their own, alternative improvements would accord with CEQA and the University would participate in funding its fair share of the improvements as provided in the Draft EIR.

RESPONSE TO COMMENTS B7A-134 AND B7A-135

For the reasons outlined above, for example in responses B7a-9, B7a-25, B7a-36, B7a-89, and B7a-131, the University declines to amend the EIR as requested. However, the University would participate in funding its fair share of alternative improvements that meet the criteria outlined in B7a-133 above.

RESPONSE TO COMMENT B7A-136

The writer's comment is noted, although the University cannot commit to allocating funding in advance of a defined project.

RESPONSE TO COMMENT B7A-137

UC Berkeley is eager to work with the City of Berkeley to appropriately monitor and address congestion. However, CEQA does not require the University to commit to on-going monitoring of unknown scope and scale.

RESPONSE TO COMMENT B7A-138

See response B7a-57.

RESPONSE TO COMMENT B7A-139

See response B7a-131.

RESPONSE TO COMMENT B7A-140

See table 11.2B-1.

RESPONSE TO COMMENT B7A-141

The requested delay information is provided in table 11.2B-2. The volume-to-capacity ratios, however, are not provided as this is inconsistent with the methodology used in the LOS evaluation.

RESPONSE TO COMMENT B7A-142

The referenced map is included in the appendix, in Figure F.1-2.

RESPONSE TO COMMENT B7A-143

All analyses were completed by using the default values in Traffix. A hardcopy of the detailed computation reports will be provided to the City of Berkeley.

RESPONSE TO COMMENT B7A-144

The cited typo has been corrected in the Final EIR.

RESPONSE TO COMMENT B7A-145

The cited typo has been corrected in the Final EIR.

RESPONSE TO COMMENT B7A-146

See response B7a-46.

RESPONSE TO COMMENT B7A-147

The writer's comment is noted.

RESPONSE TO COMMENT B7A-148

The terms have been corrected in the Final EIR as suggested. See response B7a-74.

RESPONSE TO COMMENT B7A-149

See response B7a-74.

RESPONSE TO COMMENT B7A-150

UC provides an additional \$2 subsidy beyond BART's high value discount.

The 2001 Student Housing and Transportation survey shows 1300 students use BART regularly to commute.

The Bear Pass will cost employees \$20 per month, or \$240 annually. A lower price would be expected to slightly increase the number of new regular transit users, and more significantly influence the number of new infrequent users.

Carpool numbers are derived from parking management data.

Vanpool improvements under discussion involve finding options for UCB employees to pay for their fare pre-tax.

TABLE 11.2B-1 ESTIMATED 2020 INTERSECTION VOLUMES

Intersection	AM Peak Hour					PM Peak Hour				
	Intersection Volume					Intersection Volume				
	Existing	Cumulative	Cumulative Plus Project	Project	Project % of Total	Existing	Cumulative	Cumulative Plus Project	Project	Project % of Total
#01 Marin Avenue / San Pablo Avenue	3486	4429	4580	151	3.4%	4055	5249	5389	140	2.7%
#02 Marin Avenue / The Alameda	2015	2675	2711	36	1.3%	2280	3049	3083	34	1.1%
#03 Gilman Street / Sixth Street	1334	1627	1636	9	0.6%	1861	2720	2732	12	0.4%
#04 Gilman Street / San Pablo Avenue	2575	3313	3438	125	3.8%	3381	4288	4404	116	2.7%
#05 Rose Street / Shattuck Avenue	1919	2390	2405	15	0.6%	2238	2880	2893	13	0.5%
#06 Cedar Street / Martin Luther King Way	1735	2295	2323	28	1.2%	2118	2687	2716	29	1.1%
#07 Cedar Street / Shattuck Avenue	2262	2797	2828	31	1.1%	2802	3586	3611	25	0.7%
#08 Cedar Street / Oxford Street	1784	2078	2229	151	7.3%	1680	2181	2327	146	6.7%
#09 Cedar Street / Euclid Avenue	1158	1394	1400	6	0.4%	912	1285	1287	2	0.2%
#10 Grizzly Peak Blvd / Centennial Drive	727	852	875	23	2.7%	913	1042	1063	21	2.0%
#11 Hearst Avenue / Shattuck Avenue	2039	2602	2656	54	2.1%	2418	3274	3324	50	1.5%
#12 Hearst Avenue / Oxford Avenue	2713	3187	3389	202	6.3%	2899	4573	4767	194	4.2%
#13 Hearst Avenue / Spruce Street	1363	1712	1735	23	1.3%	1477	1906	1922	16	0.8%
#14 Hearst Avenue / Arch Street / Le Conte Avenue	1285	1634	1656	22	1.3%	1400	1848	1865	17	0.9%
#15 Hearst Avenue / Scenic Avenue	913	1149	1170	21	1.8%	1166	1543	1541	-2	-0.1%
#16 Hearst Avenue / Euclid Avenue	1014	1318	1343	25	1.9%	1132	1525	1545	20	1.3%
#17 Hearst Avenue / Le Roy Avenue	807	1058	1084	26	2.5%	1005	1358	1378	20	1.5%
#18 Hearst Avenue / Gayley Road / La Loma Avenue	1440	1926	1951	25	1.3%	1555	2036	2052	16	0.8%
#19 Berkeley Way / Oxford Street	2103	2413	2619	206	8.5%	2220	2666	2862	196	7.4%
#20 University Avenue / Sixth Street	3375	4041	4338	297	7.3%	4031	4936	5210	274	5.6%
#21 University Avenue / San Pablo Avenue	3604	4416	4793	377	8.5%	4457	5440	5788	348	6.4%
#22 University Avenue / Martin Luther King Way	3337	4167	4534	367	8.8%	3859	4635	4975	340	7.3%
#23 University Avenue / Milvia Street	1760	2296	2650	354	15.4%	2088	2547	2874	327	12.8%
#24 University Avenue / SB Shattuck Avenue	2295	2948	3346	398	13.5%	2892	3697	4071	374	10.1%
#25 University Avenue / NB Shattuck Avenue	1305	1719	1936	217	12.6%	2033	2364	2637	273	11.5%

TABLE 11.2B-1 ESTIMATED 2020 INTERSECTION VOLUMES

Intersection	AM Peak Hour					PM Peak Hour				
	Intersection Volume					Intersection Volume				
	Existing	Cumulative	Cumulative Plus Project	Project	<u>Project % of Total</u>	Existing	Cumulative	Cumulative Plus Project	Project	<u>Project % of Total</u>
#26 University Avenue / Oxford Street	2453	2875	3168	293	<u>10.2%</u>	2799	3299	3565	266	<u>8.1%</u>
#27 University Drive (East Gate) / Gayley Road	1289	1632	1645	13	0.8%	1290	1605	1607	2	0.1%
#28 Addison Street / Oxford Street	1962	2264	2451	187	<u>8.3%</u>	2142	2531	2780	249	<u>9.8%</u>
#29 Center Street / SB Shattuck Avenue	1104	1410	1489	79	<u>5.6%</u>	1429	1894	1964	70	3.7%
#30 Center Street / NB Shattuck Avenue	894	1325	1402	77	<u>5.8%</u>	1451	1820	1908	88	4.8%
#31 Center Street / Oxford Street	2062	2414	2666	252	<u>10.4%</u>	2360	2809	3033	224	<u>8.0%</u>
#32 Stadium Rimway / Gayley Road	1172	1519	1573	54	3.6%	1293	1616	1658	42	2.6%
#33 Allston Way / Oxford Street	2068	2370	2627	257	<u>10.8%</u>	2364	2773	3003	230	<u>8.3%</u>
#34 Kittredge Street / Oxford Street / Fulton Street	1983	2255	2567	312	<u>13.8%</u>	2364	2783	3063	280	<u>10.1%</u>
#35 Stadium Rimway / Centennial Drive	531	677	699	22	3.2%	748	902	924	22	2.4%
#36 Bancroft Way / Shattuck Avenue	2042	2610	2804	194	<u>7.4%</u>	2693	3296	3579	283	<u>8.6%</u>
#37 Bancroft Way / Fulton Street	2216	2479	2732	253	<u>10.2%</u>	2610	3003	3244	241	<u>8.0%</u>
#38 Bancroft Way / Ellsworth Street	1025	1165	1389	224	<u>19.2%</u>	1342	1626	1791	165	<u>10.1%</u>
#39 Bancroft Way / Dana Street	866	1046	1178	132	<u>12.6%</u>	1155	1439	1624	185	<u>12.9%</u>
#40 Bancroft Way / Telegraph Avenue	887	1057	1224	167	<u>15.8%</u>	1170	1444	1599	155	<u>10.7%</u>
#41 Bancroft Way / Bowditch Street	784	874	1020	146	<u>16.7%</u>	784	948	1127	179	<u>18.9%</u>
#42 Bancroft Way / College Avenue	580	671	960	289	<u>43.1%</u>	680	819	879	60	<u>7.3%</u>
#43 Bancroft Way / Piedmont Avenue	1151	1425	1603	178	<u>12.5%</u>	1107	1344	1417	73	<u>5.4%</u>
#44 Durant Avenue / Shattuck Avenue	2209	2879	3166	287	<u>10.0%</u>	2779	3472	3692	220	<u>6.3%</u>
#45 Durant Avenue / Fulton Street	1527	1771	2038	267	<u>15.1%</u>	1676	2000	2131	131	<u>6.6%</u>
#46 Durant Avenue / Telegraph Avenue	908	1190	1376	186	<u>15.6%</u>	1373	1695	1801	106	<u>6.3%</u>
#47 Durant Avenue / College Avenue	694	997	1194	197	<u>19.8%</u>	920	1170	1306	136	<u>11.6%</u>
#48 Durant Avenue / Piedmont Avenue	1078	1361	1520	159	<u>11.7%</u>	1201	1469	1593	124	<u>8.4%</u>
#49 Channing Way / Shattuck Avenue	2356	2943	3163	220	<u>7.5%</u>	3135	3908	4113	205	<u>5.2%</u>
#50 Channing Way / Fulton Street	911	1163	1165	2	0.2%	1238	1628	1644	16	1.0%
#51 Channing Way / Telegraph Avenue	860	1259	1290	31	2.5%	977	1308	1316	8	0.6%

TABLE 11.2B-1 ESTIMATED 2020 INTERSECTION VOLUMES

Intersection	AM Peak Hour					PM Peak Hour				
	Intersection Volume					Intersection Volume				
	Existing	Cumulative	Cumulative Plus Project	Project	Project % of Total	Existing	Cumulative	Cumulative Plus Project	Project	Project % of Total
#52 Channing Way / College Avenue	813	1334	1364	30	2.2%	968	1467	1491	24	1.6%
#53 Haste Street / Shattuck Avenue	2668	3184	3404	220	6.9%	3433	4108	4320	212	5.2%
#54 Haste Street / Fulton Street	981	1202	1205	3	0.2%	1388	1727	1745	18	1.0%
#55 Haste Street / Telegraph Avenue	1104	1373	1404	31	2.3%	1189	1527	1531	4	0.3%
#56 Haste Street / College Avenue	910	1317	1346	29	2.2%	1080	1433	1457	24	1.7%
#57 Dwight Way / Martin Luther King Way	2507	2983	3067	84	2.8%	2801	3309	3389	80	2.4%
#58 Dwight Way / Shattuck Avenue	2928	3439	3657	218	6.3%	3622	4133	4311	178	4.3%
#59 Dwight Way / Fulton Street	1087	1305	1306	1	0.1%	1372	1597	1616	19	1.2%
#60 Dwight Way / Telegraph Avenue	1885	2143	2178	35	1.6%	2353	2669	2718	49	1.8%
#61 Dwight Way / College Avenue	1081	1377	1408	31	2.3%	1415	1713	1753	40	2.3%
#62 Dwight Way / Piedmont Avenue / Warring Street	1477	1755	1892	137	7.8%	1655	1975	2102	127	6.4%
#63 Dwight Avenue / Prospect Street	509	579	579	0	0.0%	616	706	706	0	0.0%
#64 Adeline Street / Ward Avenue / Shattuck Avenue	2796	3128	3325	197	6.3%	3382	3804	3987	183	4.8%
#65 Derby Street / Warring Street	1528	1805	1941	136	7.5%	1719	2029	2156	127	6.3%
#66 Derby Street / Claremont Blvd.	1611	1878	2014	136	7.2%	1884	2194	2321	127	5.8%
#67 Ashby Avenue / Seventh Street	3202	3835	3899	64	1.7%	3284	3878	3938	60	1.5%
#68 Ashby Avenue / San Pablo Avenue	3354	4347	4525	178	4.1%	4034	5086	5253	167	3.3%
#69 Ashby Avenue / Adeline Street	2695	3292	3400	108	3.3%	3089	3672	3772	100	2.7%
#70 Ashby Avenue / Shattuck Avenue	2695	3145	3331	186	5.9%	2837	3248	3426	178	5.5%
#71 Ashby Avenue / Telegraph Avenue	3589	4039	4106	67	1.7%	3773	4265	4327	62	1.5%
#72 Ashby Avenue / College Avenue	2332	2720	2783	63	2.3%	2344	2814	2871	57	2.0%
#73 Ashby Avenue / Claremont Avenue	2844	3305	3505	200	6.1%	2819	3404	3590	186	5.5%
#74 Tunnel Road / SR 13	3335	3665	3865	200	5.5%	3298	3693	3879	186	5.0%

Note : **Underlined** = Project Contributions ≥ 5%

Source : Fehr & Peers, 2004

TABLE 11.2B-2

2020 WITH PROJECT CONDITIONS STUDY INTERSECTION LEVELS OF SERVICE – DELAY CONTRIBUTIONS

Intersection	Existing				2020 Without Project				2020 With Project				Impact Significant?
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	Delay	LOS ^a	Delay	LOS ^a	Delay	LOS ^a	Delay	LOS ^a	Delay	LOS ^a	Delay	LOS ^a	
Signalized Intersections^a													
1. Marin Avenue / San Pablo Avenue	79	E	50	D	89	F	85	F	94	F	96	F	No
3. Gilman Street / Sixth Street	11	B	75	E	16	B	>120	F	17	B	>120	F	No
18. Hearst Avenue / Gayley Road / La Loma Avenue	23	C	25	C	57	E	67	E	60	E	69	E	No
20. University Avenue / Sixth Street	84	F	91	F	96	F	99	F	100	F	107	F	Yes TRA-4b
21. University Avenue / San Pablo Avenue	115	F	>120	F	>120	F	>120	F	>120	F	>120	F	Yes TRA-4c
67. Ashby Avenue / Seventh Street	34	C	52	D	54	D	88	F	54	D	95	F	No
All-Way Stop-Controlled Intersections^b													
32. Stadium Rimway / Gayley Road	26	D	35	D	66	F	73	F	79	F	82	F	No
43. Bancroft Way / Piedmont Avenue ^c	>50	F	>50	F	>50	F	>50	F	>50	F	>50	F	Yes TRA-3
48. Durant Avenue / Piedmont Avenue	17	C	18	C	26	D	27	D	53	F	34	D	Yes TRA-2b
65. Derby Street / Warring Street	>120	F	>120	F	>120	F	>120	F	>120	F	>120	F	Yes TRA-2c
Side-Street Stop-Controlled Intersections^d													
27. East Gate / Gayley Road	22 (EB)	C	20 (EB)	C	35 (EB)	E	27 (EB)	D	35 [-3] (EB)	E	22 (EB)	C	No
28. Addison Street / Oxford Street	10 (EB)	A	17 (EB)	C	11 (EB)	B	18 (EB)	C	35 [4] (EB)	E	45 [34] (EB)	E	Yes TRA-2d
34. Kittredge Street / Oxford Street	20 (EB)	C	>120 (EB)	F	23 (EB)	C	>120 (EB)	F	>120 [27] (EB)	F	>120 [3] (EB)	F	Yes TRA-2f

Bold – Indicates an intersection operated at unacceptable LOS E or F. **[x]** – Indicates number of project trips added to the impacted movement.

^a Signalized intersection level of service based on average control delay per vehicle, according to the *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 2000.

^b All-way stop-controlled intersection level of service based on average control delay per vehicle, according to the *Highway Capacity Manual, Special Report 209*, Transportation Research Board, 2000.

^c Based on 2000 HCM methodology, the intersection operates at LOS D during the AM peak hour and LOS C during the PM peak hour under Existing Conditions and LOS D under both AM and PM peak hours under 2020 No Project Conditions. However, this does not take into account pedestrian volumes. Based on field observations, this intersection has a heavy pedestrian volume, resulting in major delays for vehicles under existing conditions. With the additional traffic at the intersection under 2020 no Project and 2020 with Project conditions, the intersection is estimated to continue operating at LOS F. Project trips are more than 5% of total traffic; therefore, impact is significant.

